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THE BLOOD PRESSURE IN THE LEFT VENTRICLE
AND IN THE AORTA.*

By DR. H. GRADLE.

(From the Institute of Experimental Pathology, at Vienna.)

Some years ago Prof. Fick† made the interesting observation, that the blood pressure in the left ventricle of the dog's heart is less than in the aorta. He conducted the investigation by means of a long tube, which could be introduced through the carotid artery and aorta into the left ventricle, which was connected with a registering manometer, so that a graphic record was obtained alternately of the blood pressure in the aorta and in the left ventricle. "As soon as the tube—in open connection with the manometer—is pushed forward into the ventricle, the index of the manometer is observed to sink and record oscillations, of which the highest does not even reach the lowest pressure previously found in the

* Contained in the LXXIII Vol. of the Sitzungsberichte der k. Acad. der Wissensch

† Jeber die Schwankungen des Blutdruckes in verschiedenen Abschnitten des Gefässsystems. Würzburger Verhandlungen, 1873.

aorta. On withdrawing the tube again into the aorta, the index records pulsations high above the summits of the ventricular waves." (loc. cit. p. 232.) Hereupon Fick resorted to a second manometer, connected with the crural artery, while the first was being introduced into the heart in the above manner. He thus assured himself that the tension in the crural artery was not altered by the introduction of the tube into the heart, and furthermore that it exceeded the pressure existing in the left ventricle. After proving experimentally that this unexpected result was not due to inaccuracy of the manometers, Fick adds, as a further evidence of its correctness, that these differences in pressure only occur when the heart beats very rapidly (after section of the vagi). The difference in tension disappeared on irritation of one pneumo-gastric nerve.

As an explanation of this strange phenomenon, Fick assumes that the systolic force does not conduce as much to raise the pressure of the blood in the ventricle as to confer upon that fluid a great velocity. However, he does not deny his doubts as to the real existence of the entire phenomenon. Previously Chauveau and Marey had estimated the pressure in the aorta and ventricle of the horse, and found it about equal in both places.

In a later publication* Marey refers to these experiments, and adds that he does not hesitate to consider those differences found by Fick the result of too great an inertia of the manometers employed; in the ventricle the variations of pressure are so considerable and of such a rapidity that the manometer is not able to record them accurately.

I have tested the statements of Fick by means of his own, as well as two other methods. After opening the thorax of a curarized dog, maintained by artificial respiration, I either introduced a curved tube into the left ventricle, through a small opening made in the auricular process, or forced a sharp canula directly through the walls of the ventricle into its cavity. In some of the latter instances the heart suddenly

* *Physiologie Expérimentale. Travaux du Laboratoire de M. Marey. Paris, 1875, p. 38, note.*

ceased to beat, but in most cases the procedure was well borne, and I could even with impunity enter the canula a second time, after having withdrawn it—the wound giving rise to but little hemorrhage. The tube or canula being connected with a mercurial manometer, while a second instrument communicated with the carotid artery; I thus obtained on the paper of the kymographion the simultaneous graphic record of aortic and ventricular tension.

Having convinced myself of the correctness of Fick's statements, I sought to ascertain whether the conditions of the phenomenon are of a purely mechanical nature. A dead heart was filled with water from a tube communicating with the left auricle, the aorta was prolonged by means of a rubber hose, the manometers connected as in a living animal and the systolic contraction imitated by compression with the hand. As the result I obtained a graphic trace quite similar to those furnished by the living animal. Hereupon I constructed a model of the circulation to study the phenomenon at leisure. An ordinary rubber balloon, similar to that of Davidson's syringe, supplied with water from a reservoir with low pressure on the one side, communicated at the other end with a tube, which for the sake of convenience we will call aorta, while we may refer to the balloon as the heart of the system, and to its mechanical compression as the systole, corresponding to the bicuspid and semi-lunar valves; the balloon was also supplied with a valve at each end, opening with the current. The balloon as well as the aorta communicated besides with lateral tubes, which could either be prolonged by means of perpendicular glass tubes, the height of water in which indicated the pressure directly, or which could be connected with mercurial or Fick's manometers, for the purpose of registering the pressure on the paper of the kymographion.

The experimental conditions in this system are most readily comprehended, when the aorta is closed at its terminal end; in this case the results to be described are the same whether the aorta consists of an elastic or an inelastic tube, as glass. The efflux of water being thus prevented, the fluid rises in

both manometers to a height equal to the height of the reservoir, which being the lowest pressure attainable under the circumstances, we will call zero. On compressing the balloon a number of times the following is the result: The first systole raised the fluid to a certain height, equal in both manometers; on its cessation the pressure returns to zero in the heart, while the semi-lunar valves maintain the column of water in the aortic manometer at the point reached during the systole. The next systole, however, having but the same effect on the cardiac pressure as the first, lifts the column of water in the aortic manometer to a height exceeding the level of the fluid in the cardiac manometer itself, so that with each successive systole the difference between the cardiac and aortic pressure increases in favor of the latter. While the terminal end of the aorta is closed, the duration of the interval between the systoles is, of course, of no consequence as to the result. However, as the difference existing between the heights of the fluid in the two manometers augments, the additional increase of aortic tension becomes less and less with each following systole. The apparent contradiction, that the semi-lunar valves are opened by a systole, while the pressure in the aorta exceeds by far that in the heart itself, loses its obscurity on varying the rapidity of the systole. If the compression of the balloon is performed very slowly, the water in the aortic manometer begins to rise only when the same height has been reached in the cardiac manometer, and in this case it does not exceed the level in the latter. But as the balloon is compressed more and more rapidly a limit is formed, beyond which the difference between the two manometers begins to appear. In short, as the celerity of the systole increases, the difference between the cardiac and aortic pressure produced by the same augments. But since the semi-lunar valves can be opened only by a force exceeding the pressure exerted upon its aortic surface, we are safe in maintaining that the pressure indicated by the manometer communicating with the heart is not a full measure of the systolic force. In other words, the result of the systole is not only the augmented cardiac tension, but also the momentum conveyed to the fluid.

If the water is allowed to flow from the terminal end of the aorta, the conditions are somewhat altered, though the above considerations are still applicable. In case the entire mass of water, emptied into the aorta during the systole, is permitted to escape during the diastole, the above difference in tension, though produced during the systole, speedily disappears. But if the open end of the aorta is obstructed beyond this limit—or, what amounts to the same thing, if the interval between the systoles is correspondingly shortened—each following systole results in an augmentation of aortic tension on the same principle as when the aortic outlet is entirely closed. But in this case, also, the augmentation of aortic pressure becomes less and less with each following systole, until finally every systole raises the aortic pressure merely as much as it had fallen during the preceeding interval; so that the water in the aortic manometer pulsates at a fixed height, which however far exceeds the level of the fluid in the cardiac manometer. The difference between the cardiac and aorta manometers of a system imitating the arterial circulation therefore depends on:

- I. The force of the systole.
- II. The celerity of the systole.
- III. The duration of the interval.
- IV. The resistance to the current.

The possibility of a difference in the height of the fluid, or, in other words, the pressure in the two manometers, depends, of course, on the presence of the valve representing the semi-lunar valves, since on its removal the equilibrium is at once restored, and no further accumulation of aortic tension can be effected.

The conditions of pressure during life will be most readily appreciated by reference to the following table:

CURARIZED DOG—BOTH VAGI DIVIDED.

Time.	Oscillations of		Difference between the maximum pressure in the ventricle and aorta.
	Ventricle pressure.	Aortic pressure.	
	48-74 mm. Hg.	100-104	30 mm.
ARTIFICIAL RESPIRATION SUSPENDED.			
12 Sec.	70-104	160-164	60
12 "	70-104	164-168	64
12 "	62-98	146-150	52
12 "	60-94	148-152	58
12 "	62-98	164-168	70
12 "	72-108	180-186	78
12 "	82-120	204-210	90
12 "	88-126	220-228	102
12 "	96-138	240-244	106
ARTIFICIAL RESPIRATION RESUMED.			
12 "	120-162	234-242	80
20 "	78-116	154-162	46

From the result of this experiment, as well as many others, we learn that the oscillations of pressure in the left ventricle are much greater than those occurring in the aorta; while, however, the minimum of tension in the latter vessel far exceeds the maximum pressure found in the heart itself. The comparison of the different records shows, that—conforming with the results found on the models—the difference increases with the force of the systoles; in other words, the higher the summit of the ventricular wave the greater will be the corresponding increase of the aortic pressure. Further on, the difference will rise with the resistance to the current in the arteries; on constricting the systemic arterioles by asphyxiating the animal the aortic pressure increases more than the ventricular tension. The celerity of the systole, which is of such influence in the model, is a factor that we cannot vary at liberty during life. Lastly by prolonging the interval between the systoles by irritation of the vagus we permit more blood to pass the capillaries, and hence the aortic pressure will be lower at the beginning of each systole, the longer the duration of the diastole. This result, however, can be masked by simultaneous augmentation of the resistance to the passage of the blood in the smaller vessels; and thus, while during asphyxia the pulse becomes much less frequent (when the

vagi are intact), the difference in pressure increases, nevertheless, on account of the contraction of the arterioles.

I have attempted the destruction of the semi-lunar valves, in the living animal, by introducing a long sound through the right carotid artery, and in pushing it forward, perforating the pockets of the valve, while guided by the finger placed on the origin of the aorta. In two cases, in which the autopsy proved the destruction of two of the pockets, the cardiac trace approached that of the aortic pressure, though there was still some difference both in the height of the waves and in the absolute pressure. In a third dog, however, whose valve I succeeded in destroying entirely, the record of the ventricular waves was the exact *fac-simile* of the aortic pulsations in all details.

These observations on the circulation during life, as well as on a model imitating it, hence lead to the conclusions, that normally the blood pressure in the aorta exceeds that of the left ventricle, and that this depends on the momentum of the blood in the ventricular cavity, which is not registered by a manometer communicating with the heart. Finally, that the accumulation of tension in the aorta is possible only when the restoration of equilibrium is prevented by the action of the semi-lunar valves.

ON THE STUDY OF ETIOLOGY; ITS IMPORTANCE, AND THE NEEDED METHODS TO INSURE SUCCESS.

By N. S. DAVIS, A. M., M. D., CHICAGO, ILL.

(Read to the Chicago Medical Society, May 1st, 1876.)

To the thoughtful practitioner there is no department of medical science in so unsatisfactory a condition as that which relates to the *causes* of disease. With a steadily increasing tendency in the professional mind to refer all acute diseases, whether epidemic, endemic or sporadic, to specific causes or viruses, capable of propagation by fermentative or zymotic

action, there is an equal tendency to indulge in hypotheses instead of carefully observed facts. It is so much easier, and takes so much less time, to invent a plausible theory and then use it as though it had been already verified, than to patiently observe a sufficient number and variety of facts to afford a reliable deduction, that few can resist the temptation to follow the former course. It is amusing sometimes to notice how readily, and apparently unconsciously, we assume one purely hypothetical proposition and then make it the basis of a lengthy paper or a monograph. For instance, in a paper read to another society in this city a few months since, the writer assumed substantially, first, that every *specific* disease must have a specific cause; second, that cholera infantum and dysentery were *specific* diseases, hence, logically, they must each depend on a specific infectious cause, and should be put together in one group; while the cases of simple diarrhœa, not being *specific*, and consequently not dependent on a specific infection, should constitute a second group. This latter group he again divides into no less than *five* classes or varieties, according to their assumed *causes*, namely: 1st, from the reflex irritation of dentition; 2d, from "sepsis or toxæmia;" 3d, from "acute indigestion;" 4th, from malarial infection; 5th, from intestinal catarrh, produced by cold and damp. Thus, in a paper written avowedly for the purpose of separating the different bowel affections of children from each other, we have one group embracing dysentery and cholera infantum, and another embracing five varieties of "simple diarrhœa," all based on supposed differences in their *causation*. There is no intimation as to how we are to distinguish one of these varieties from another at the bedside of the patients. To sustain the idea that dysentery is a *specific disease* produced by a specific cause, it is declared to be something more than, and different from *ileo-colitis*, although presenting similar symptoms and the same post-mortem appearances. He speaks of the "germs of cholera" bringing forth cholera "as immutably as the grain of corn brings forth corn, and no other grain," with as much confidence as though such *germs* had been fully identified and their specific influence established. And yet he

says, "whether its (cholera infantum) essential pathology lies in the presence of bacteria or a blood ferment, we cannot perhaps declare to-day"; and then, on the same page, makes the following declaration: "Respecting the real causation of cholera infantum we must confess our utter ignorance, for nothing is positively known of it." Mark the progress: First, specific *germs* as the cause of a disease are not only spoken of confidently, but an *immutable law* of action assigned them. Second, we are reminded that it is *uncertain* whether the essential pathology of the same disease lies in the presence of bacteria or a blood ferment. Third, he confesses "utter ignorance" of the real causation of the disease, saying that "nothing is positively known of it."* To make confusion more confounding, it will be noticed that in the second proposition just stated, the "essential pathology" of disease and the *cause* are made identical. In other words, the *cause* and the *thing caused* are one and the same. I have not alluded to this essay of one of our most intelligent physicians for the purpose of criticising it, or of finding fault with its author, but simply to illustrate the point under consideration. The same disposition to assume the existence of causes acknowledged not to have been verified by any adequate degree of proof, is manifested by writers of the highest authority.

Thus, in Ziemssen's Cyclopædia of the Practice of Medicine, now in the process of publication, etiology enters largely into the basis of classification or arrangement of diseases. And a large portion of the most important diseases that come under our observation are designated acute and chronic "infectious diseases;" thereby implying that they depend for their essential cause upon some specific infectious poison. In the introductory chapter to the first volume, Liebermeister says: "Under the name of *Infectious Diseases* we grouped together those affections which we know, or at least *believe*, must originate through the infection of the system with certain peculiar poisonous matters, and which are mainly distinguished from the ordinary poisons by the fact that they can reproduce themselves, under favoring conditions, to an endless degree." Again

* See Chicago MEDICAL JOURNAL AND EXAMINER, Jan., 1876, pp. 16 and 17.

he says, "the poisons of infectious diseases can reproduce themselves, and to an unlimited extent." Although this eminent writer, in this same introductory chapter, freely admits that it is still an open question whether the supposed *infectious poisons* are living germs—"contagium vivum"—or inorganic materials; and that "in the large majority of infectious diseases the poisons by which they are called into activity have been hitherto unknown;" thereby clearly admitting the whole to be nothing more than a plausible hypothesis; yet the simple fact that a long list of important diseases are classed under that name will lead others to speak and write volumes in a style of positive phraseology, as though every hypothetical infectious poison were a demonstrated fact. Indeed, Liebermeister himself, while fully admitting that his doctrine of a "contagium vivum," or living self-propagable germs as causes of disease, was first rendered popular by the investigations of Lieuenhæch, and subsequently abandoned, and now again revived only under more favorable auspices, but requiring for its establishment much additional and careful investigation, is constantly using expressions which fairly imply that such *germs* and their action as causes of disease are already demonstrated facts. It is this almost universal disposition to make a limited number of imperfectly observed facts the basis of plausible hypotheses, or to boldly assume the existence of germs, miasms, contagions, etc., as causes of disease, and to endow them with just such properties and capabilities as are necessary to make them serve our purposes, that has filled the pages of medical literature with a heterogeneous mixture of facts and fancies, or assumptions, sufficient to exhaust the patience of a Job and confound the wisdom of a Solomon. Yet, when we remember that much of our progress in the rational treatment of disease, and nearly all of advancement in sanitary science, must depend on the extent and accuracy of our knowledge of *etiology*, we shall realize the importance of any measures really calculated to bring into existence well devised plans for systematic observation of facts until they afford reliable deductions, instead of fragmentary

observation sufficient only for the suggestion of plausible theories.

The difficulties encountered in the study of this branch of medical science are more numerous and troublesome than in any other department. This arises from the fact that the questions presented for solution are more complicated. In other words, the factors or elements necessary to be taken into consideration in solving every problem concerning the causation of disease, are not only numerous, but many of the factors are themselves complex. As living beings we move in an atmosphere containing many and constantly varying elements and properties, yet holding the most intimate relations to the vital processes within us; and we are subject to the impress of forces, material and mental, of the most varied character. In studying pathology we have directly before us the phenomena during life, and the results in the diseased structures after death. In the study of therapeutics we hold the medicinal agents in our own hands, control their administration and have the opportunity to watch their effects. But in the study of etiology the agents and forces active in the production of disease, neither warn us of their approach nor tarry for our inspection. Yet, with the exception of the specific viruses of variola, rubeola, scarlatina, syphilis, and a few others, there is no doubt but that all the causes of disease, whether consisting of living germs — *contagium vivum*,— inorganic poisons, or simple modifications of the natural elements and forces that surround us, act only under certain laws or “favoring conditions.” Hence the first steps of real permanent progress must consist in determining these favoring conditions. For, though Liebermeister and others often broadly assert that it is the peculiar characteristic of infectious poisons that they are capable of self-propagation, and that to an unlimited extent, whether in the body or exterior to it, yet this is true *only* in the presence of certain necessary conditions. That the prevalence of many important diseases is influenced to a very great degree by season of the year and local sanitary conditions, is apparent to all. For instance, the bowel affections of children, cholera, periodical fevers, yellow fever, etc., prevail almost

wholly in the summer and autumn, while pneumonia, croup, catarrh, and rheumatism prevail chiefly in the winter and spring. But if we attempt to go beyond these general and easily recognized facts, and inquire for the particular element or elements more immediately concerned in the production of any one of these diseases, we are met by difficulties not easily overcome.

Chief among these difficulties, is the absence of continuous carefully recorded facts, both in regard to the appreciable conditions and qualities of the atmosphere, and the *date* of the initial symptoms of diseases. We have an abundance of meteorological tables presenting the *mean* daily, monthly, and annual temperature, the moisture, the rainfall, and the extremes of heat and cold; but the equally important items, relating to the direction of the winds, the daily variations of temperature, and the electric and ozonic conditions of the atmosphere, are either omitted or so imperfect as to be of little value. On the other hand, recorded observations in regard to the date of the commencement of the active phenomena of disease, are almost entirely absent from the pages of our medical literature. The statistics of mortality give us only the date of deaths, but neither inform us correctly concerning the whole number of cases of sickness, nor the date at which any of the cases begin. To study satisfactorily the causes of all acute diseases not known to be propagated by specific contagion engendered in the body of the sick, we need three distinct series of observations and record, made simultaneously and in a sufficient number of places, and continued through a series of years.

One of these should consist of a complete registry of atmospheric conditions, including electricity and ozone. The observations and records now made under the direction of the signal service bureau of the general government, include a sufficient number of stations, and are sufficiently complete, except in regard to electricity and ozone. Another series of observations should be made in the same localities where the meteorological records are kept (so far as these are inhabited) by active and intelligent practitioners of medicine, who should

endeavor to ascertain and record the exact date of the commencement of active symptoms in all attacks of acute disease coming under their observation, and the date of relapses when such occur. A third series should consist in a systematic microscopical examination of the atmosphere, the dew and the drinking water, in regard to a uniform plan, and in as many of the same localities where the meteorological and clinical observations are made, as competent observers could be found who would faithfully carry on the work. It is obvious that a careful comparison of the results of the first two series of observations would enable us to know the exact relation between given conditions of the atmosphere and the development of different forms of disease. It would enable us further to trace the relation between the *degree* of certain atmospheric conditions and the *severity* of the attacks of disease. While the third series of observations, compared with the results of the first and second, would go far toward deciding the question whether the coincidence of certain atmospheric conditions developed special organic germs; and whether these bore any direct relation to the commencement, progress and decline of certain forms of disease.

It is only by carefully considered methods of investigation, established in many localities, and executed faithfully through a series of years, that all the data can be obtained for determining the true etiology of acute diseases, whether endemic, epidemic or sporadic. With the aid now attainable from the signal service bureau of the general government, covering the most expensive part of the series of investigations needed, this and all similar medical societies could easily plan and execute such arrangements as would secure the coincident clinical and microscopical observations and records. Let as many of the members engaged in active general practice as possible, make it a rule to ascertain and note in a memorandum book for that purpose every case of acute disease coming under their observation, specifying as exactly as possible the *date* of the commencement of symptoms of disease. Let them once in three or six months tabulate these. Let a sufficient number be engaged to make daily examinations with the microscope.

Let another set keep a daily record of the electric and ozonic conditions of the atmosphere. Let the tabulated statements of all of these be reported to a committee appointed for that purpose, once a year. And when this committee has carefully compared the several series of observations and the meteorological records, let them condense the same into one tabulated report, putting one copy on file and sending one to the committee on the same subject appointed by the proper section of the American Medical Association; by whom it should be carefully compared with similar reports from all other societies, and the results published annually in the transactions of the Association.

It is true that such a scheme would require, on the part of all engaged in it, much patience and pains-taking labor; and this, above everything else, is just what the science and literature of our profession most need. At present we are overwhelmed in every direction by detached facts, partial or incomplete observations, imperfect records, and hasty generalizations. And if this, and kindred societies, acting in concert with the proper sections of the American Medical Association, would give more time to the devising of more complete methods of investigation, and the patient supervision of their execution until completed, they would do more to advance the science and art of medicine in five years, than could be accomplished in twenty by receiving and discussing reports and papers presented by individual members in the ordinary way. And not only this, but every member engaging in such systematic observations, and the keeping of records, would be doubly compensated by the increased mental discipline, habits of observation, and accuracy of knowledge which he would acquire.

FIBROID TUMORS OF THE UTERUS.

REPORTED BY J. B. CRANDALL, M. D., STERLING, ILL.

Laura King, aged thirty-seven years, never has been pregnant. The patient's early history I give as she gave it to me.

At the early age of eleven years she commenced to have her menstrual periods. She had a moderate flow at each monthly period for some four or five months, when they ceased and did not reappear until about eighteen months later. Her health being rather poor *ad interim*, again at the age of thirteen her health began to improve, her menses reappeared and continued regular for some twelve months. After that her periods averaged from three to five months; her health being very changeable until she was about sixteen. She was then taken down with a fever and had a complication of diseases; was confined to her bed for several months. Her last complication was soreness and great pain over the region of the uterus; said that her attending physician called it inflammation of the womb. But she finally recovered, and at the age of seventeen she got strong again, her periods became quite regular, and she enjoyed tolerably good health, with the exception of more or less trouble from granulated eye lids, up to the date of the development of fibroids in the uterus.

Her attention was first called to a circumscribed spot about two inches below and to the left of the umbilicus, on or about the first of June, 1875, which seemed quite hard to the touch. Mrs. K. was residing at an adjoining town, and called upon a physician who recommended a course of hip baths, blisters, and irritating plasters. She did not improve under this treatment, the tumor increased in size, and her general health was gradually failing.

Her case becoming an alarming one to herself and friends, she was induced to visit Chicago for the purpose of consulting Prof. W. H. Byford, December 13, 1875. After making the necessary examination Dr. Byford gave her a letter with the diagnosis of her case and plan of treatment to hand to her attending physician in Sterling. The contents of the letter are as follows:

CHICAGO, Dec. 15th, 1875.

MY DEAR DOCTOR: Mrs. Arthur King, of Sterling, Illinois, visited me a day or two since. I find her the subject of a fibrous tumor of the uterus that extends almost as high as the

umbilicus. It is developed mostly in the right side of the organ. I prescribed for her Squibb's fluid extract of ergot, hoping it might benefit, if it did not cure her. I sent by her a copy of my address before the American Medical Association, in which you will find all that I can say of the treatment of fibrous tumors of the uterus. I cannot advise any better course of treatment than is there given particularly, and I have great faith, as you will see, in the efficacy of ergot in the treatment of these cases.

I am very respectfully,

W. H. BYFORD.

Mrs. King, upon her return from Chicago, delayed taking the medicine ordered by Prof. Byford for some six or seven days. She took the first dose as ordered, 30 drops of Squibb's fluid extract of ergot on the morning of Dec. 20th, took three doses during the day. Pains commenced soon after taking the second dose. They were excruciatingly severe for some three hours, after which they continued less severely for two days and nights. She had more or less hemorrhage from the uterus after taking the ergot.

Dec. 26th, 1875, made an examination, which confirmed that made by Prof. Byford, only the tumor had risen a little above the umbilicus. The patient was in a state of nervous prostration and worn out by severe pain and loss of sleep. The pulse was very feeble and almost running together, numbering from 110 to 120 per minute; skin dry and hot; temperature 100°, with great pain and tenderness over the uterus and lower bowels. The feet were drawn up; the face bore a pinched and peculiar expression, common in cases of peritoneal inflammation.

Dec. 27th. Ordered morphia sulphate gr. $\frac{1}{4}$, to be repeated every fourth hour. Patient became easier and slept for about four hours after the fourth dose. I also gave fluid extract aconite gtt. iv, in water, to be repeated every third hour.

Dec. 28th. Patient quiet, and the symptoms were all changed for the better. Continued the morphia and aconite for about a week, giving smaller doses and at longer intervals.

Jan. 5th, 1876. All febrile symptoms having subsided the patient was left quite weak. Ordered the following:

R	Ferri. et Quin. Citrat,	3 i.
	Acidi Citrici,	3 ij.
	Spts. Vin. Gallici,	} aa.	3 ij.
	Syr. Simpl.,		

Dose, teaspoonful four times a day, with nourishing diet, beef tea and bitter ale, to be taken *pro re nata*. To procure rest, ordered a small opii. et camph. pill at bed time.

Jan. 11th. The patient commenced to pass from the uterus small masses of fibrous growths, ranging in size from that of a small chestnut to an English walnut. There were also portions of fleshy substance that came away that evidently belonged to a much larger tumor, as the edges were rough and uneven, showing they had been torn from the main tumor. The odor from those pieces was very offensive. This discharge of foreign growth lasted for about ten days, the smaller ones coming first, which were in the main free from decomposition, but the larger were very offensive and much decayed. The volume of the uterus was much diminished, and as the tenderness and hardness of the organ had abated, the patient was on July 21st ordered to continue the use of the ergot. She had up to this date taken only three doses. It was continued for a week but had no apparent effect except to nauseate and keep her from taking food. Patient had no pains this time from the use of ergot; had a discharge of yellowish matter like thin pus. The ergot was discontinued for one week.

Feb. 1st. Again commenced the use of ergot as first ordered, and continued it for two weeks without much effect, the discharge becoming lighter and less in quantity, and less offensive.

Feb. 14th. Patient is drinking ale; up and about the house; gaining in every respect. The uterus is of normal size and position. She has gained ten pounds in weight; says that she feels quite well, and in fact like a new being.

Feb. 26th. Called and found Mrs. K. about her work, and completely cured.

It appears that the first three doses of ergot taken by this patient were the cause of her recovery. They produced such strong and protracted contractions of the uterus as to break up the larger tumor as well as the adhesions of the smaller ones, which were then set free and discharged, as heretofore described.

REPORT OF A CASE OF SUICIDAL MELANCHOLIA WITH A GENERAL DESCRIPTION OF THE DISEASE,

AND SOME REMARKS ON ITS MEDICO-LEGAL RELATIONS.

By D. R. BROWER, M. D.,

Late Superintendent Eastern Lunatic Asylum of Virginia.

Mr. A. B. insured his life for the benefit of his wife, in a Connecticut Mutual Life Insurance Company in the year 1866, and committed suicide in the year 1871. In due time his wife presented the necessary evidence of death and demanded the payment of the policy. The Company refused the demand for two reasons, to-wit: first, that the assured died by his own hand, and second, that he had been intemperate during the term of the policy to such a degree as to impair his general health. The policy according to its express provision was rendered null and void by the existence of either of these conditions. The wife brought action in court to recover the sum, and rejoined to the plea of the Company that her husband was insane at the time of his death and not responsible for the suicide, and that he was not intemperate to the degree alleged.

The case was tried before Judge Hopkins of Wisconsin, sitting in the United States District Court of Chicago. The attorney for the plaintiff summoned Drs. Norman Bridge, E. H. Horsey and the writer, all of Chicago, to testify as experts.

The evidence in the case furnished the following history: Mr. A. B. was a carpenter, with very little education; he

worked at his trade for a number of years, until impairment of his general health compelled him to abandon it ; he then entered upon first the grocery and then the furniture business, but after the great fire in Chicago, came to this city, resumed his trade and continued to work at it until about a week before his death. He had been in the habit of drinking ardent spirits for many years, but not to a sufficient extent to warrant its being called excessive, and for a week previous to his death drank none at all. He was a man of cheerful disposition and social temperament ; his family relations had always been pleasant, and no serious calamity or bereavement of any kind had befallen him. About a week before his death he stopped work, said that he was sick, became depressed and solitary in his habits, spent much time in his room alone, had no disposition to indulge in the pastimes of his friends, and insisted that some terrible calamity was about to befall him. He was restless at night ; he frequently awoke his bed-fellow to tell him he could not sleep and that he heard strange noises ; he complained of pain in his head ; he lost his appetite ; he at times would complain of feeling very chilly, so much so that he would put his overcoat on and sit close to the stove ; he would frequently and in such a manner as to excite the suspicion that something was wrong with him, jump up, leave the room, go out of doors without any apparent object, be gone a short time and return ; he would almost every day declare his intention of going to work, but when the time came to start would change his mind, then promise to go the next day, but always with the same result. The morning of the suicide found him unusually cheerful and social, so much so that he played at cards with his comrades, and attended to business, in fact settled up his accounts of partnership work done with them. At noon they separated, his companions went to dinner and he to his bed chamber, and when they next saw him he was lying on his bed dead, with his throat cut, and the pocket knife with which the act was done beside him.

No physician attended him during his sickness and nothing was ascertained concerning his antecedent history nor that of his family.

The experts were called upon to give a general description of suicidal insanity, and then had submitted to them a hypothetical case embracing all the principal points of the evidence above given, and were required to give their opinion as to whether or not this hypothetical case was one of insanity. The experts agreed in opinion that it was.

The defense did not press the plea of inebriety, but they requested that the jury be instructed that not only must the plaintiff prove insanity, but such kind and degree of insanity as would deprive the assured of his capacity of understanding the nature of the act he was about to commit, and the consequences that would result from it; in other words that the act must have been committed while under the influence of delirium or irresistible insane impulse, in order to avoid its consequences.

The court refused to give the instructions requested by the defense, and read as the rule of law that must govern the case, the opinion rendered by Mr. Justice Hunt, U. S. Supreme Court, in the case of *Life Insurance Co. v. Terry*, 15 Wallace, 580, the substance of which is as follows: If the assured being in the possession of his ordinary reasoning faculties, from anger, pride, jealousy, or a desire to escape from the ills of life, intentionally takes his own life, the proviso attaches, and there can be no recovery. If the death is caused by the voluntary act of the assured, he knowing and intending that his death shall be the result of his act, but when his reasoning faculties are so far impaired that he is not able to understand the moral character, the general nature, consequence and effect of the act he is about to commit, or when he is impelled thereto by an insane impulse which he has not the power to resist, such death is not within the contemplation of the parties to the contract, and the insurer is liable.

The jury after deliberating for twenty-four hours were discharged. They had agreed on the question of the man's insanity, but disagreed as to its sufficiency to relieve him from the responsibility of the suicide.

This case of Mr. A. B. is evidently one of suicidal melan-

cholia, and we shall now invite your attention to a succinct description of this form of insanity.

In the first place it is well to state that insanity is a manifestation of cerebral disease, not a disease *per se*, but a symptom of disease; that it cannot be encompassed within a definition sufficiently comprehensive to include all its manifold manifestations and yet sufficiently circumscribed to exclude those forms of brain disease that are not cases of alienation. Insanity is merely a relative condition, a departure from a condition of sanity, therefore without being well acquainted with the mental manifestation of the brain in a state of health, it is impossible for us to successfully determine and appreciate those manifestations which are the result of disease. It is necessary, in making this comparison, that each mind be compared with itself, inasmuch as no two persons are constituted alike, and hence one may do with impunity many things that if done by another would be regarded as unequivocal evidence of insanity.

In the next place it is well for us to agree upon classification in order to intelligently consider the subject, for alienists differ widely as to the best method of classifying insanity, and have proposed many systems. Without entering upon any discussion of this point, we shall slightly modify an old classification, and divide insanity into three classes, as follows: first, states of mental weakness, including amentia and dementia; second, states of mental exaltation, including mania and monomania; third, states of mental depression, including melancholia. Amentia is unsoundness of mind from arrest of development, either congenital or occurring in childhood, and is divided into idiocy, imbecility, and moral insanity. Dementia is diminished activity, or inertness of the faculties, occurring subsequent to their mature development, is generally a sequence of other forms of insanity, and presents all gradations of mental weakness, from a condition resembling the mild enfeeblement of old age to a condition of complete fatuity. Mania and monomania are both characterised by a predominance of exaltation, but differ from each other in the amount of intellectual or emotional impairment.

Melancholia is that form of insanity which is characterised by a predominance of mental depression. This depression, however, is not always present, for it sometimes gives way to an excitement difficult to distinguish from mania, and sometimes to a condition closely approximating the normal mental state of the individual. This form of insanity is frequently only the initiatory stage of mania, monomania, or dementia. The principal cause of melancholia is hereditary transmission, but any cause that will produce debility of the physical structure, or impairment of the moral or intellectual faculties, may result in this form of insanity. Its development is at times so gradual that we fail to notice it until some overt act calls our attention to its existence, and then going back and critically examining the symptoms of our patient we may detect many evidences of derangement that at the time we permitted to pass as too trivial to notice. Its development is at other times very sudden, coming on as the result of some great calamity, or severe nervous or mental shock.

In the beginning of melancholia, the intellectual faculties may be perfectly unimpaired, the only morbid phenomenon being manifest through the affective faculties, the feelings, or emotions of the patient. He may be filled with sorrow, grief, despondency, or serious apprehensions, and fully appreciate his situation, but unable to account for the strange and undurable misery that overwhelms him. He may attend to his ordinary occupations as usual, and by concealing his emotions from his friends, pass among them as perfectly sane.

As the disease progresses the depression becomes deeper and deeper, the mind dwells more and more constantly on the one idea, the patient takes less and less interest in things around him, forsakes his former associates and dwells in solitude. Still further progress brings intellectual impairment and develops delusions. If the patient is of a religious temperament his delusions will assume the religious type; he will mourn over his lost soul; he will grieve over unpardonable sin; he will imagine himself overwhelmed by horrible crimes he thinks he has committed; he will beg you to save him from impending destruction. If the religious element does

not predominate, his delusions may arise from some fancied change in his bodily condition; he may believe himself dangerously ill, suffering from a loathsome and fatal disease, or one of an extremely excruciating character; he may imagine that he has lost the use of his limbs, or that his legs are made of glass, and will allow no one to touch them for fear of breakage; or he may suppose that some horrible animal has taken up its abode in his body. Sometimes this perversion of sensation is the result of impressions propagated by disease, as revealed by *post mortem* examination. For example, a woman who imagined herself pregnant with the devil was found after death to have hydatids of the uterus. At other times they are disconnected with any such impressions. A case is related of a man who was relieved of a snake he imagined in his bowels, by a pretended surgical operation, but afterwards took up the notion that the snake had left its ova behind, and that he would soon be filled with other snakes; but his physician made the ingenious reply that in this he was entirely mistaken, inasmuch as the snake was a male, and thus completely dissipated his delusion.

Notwithstanding the emphatic character of delusions, and the fondness of the patient to dwell upon them, yet the mind may exhibit no impairment of its original vigor, nor any unsoundness whatever on any other topics.

The physical symptoms generally found present in melancholia are, pain, with a sense of weight, throbbing, fullness, giddiness in the head; insomnia, with restlessness; impairment of the functions of the special senses, amounting, in many cases, to hallucination of sight, sound, taste, or smell; anæsthesia, or hyperæsthesia of the skin; impairment of general nutrition and impoverishment of the blood, in consequence of which the body become emaciated, skin pale and sallow, the muscles feeble and relaxed, the strength fails, and in short we may have all the symptoms of anæmia; the digestive system is disordered, the appetite is feeble or capricious, there is sometimes complete anorexia; the respiratory and circulating systems are frequently deranged; the heart's action may be irregular; attacks of palpitation are frequent; the respiration

is sometimes very slow and labored, at other times exceedingly hurried; the pulse is feeble and compressible, and the extremities are cold; the menstrual functions are often deranged, and we may have amenorrhœa, menorrhagia, or leucorrhœa, and the temperature will be found below the normal standard.

Suicidal melancholia differs from the melancholia above described only in the suicidal manifestation; the majority of cases of melancholia, particularly those in which hypochondria is present, naturally tend to suicide. It is the result specially to be feared and most carefully to be guarded against in every case.

Suicide is, in the opinion of many people, conclusive evidence of insanity. These people, fortunate in the possession of healthy and well balanced minds, with no neurotic inheritance, cannot in any other way account for so strong and unnatural a phenomena. This opinion, popular as it is, is not sustained by a careful consideration of the subject. There are some, who disbelieving in a future state, will, without hesitation, when met by obstacles in life that seem insurmountable, seek to terminate their existence rather than attempt to encounter them. Many wise men have written in defense of it. The patriotic Roman was taught that it was better to die by his own hand than submit to slavery. The loss of power, wealth, or dearly loved friends, constitute motives sufficient to overpower such as prefer to seek possible good hereafter rather than be compelled to suffer certain misery here; refusing to accept the immortal poet's precept, that it is better

"To bear those ills we have
Than fly to others that we know not of."

In all cases of suicide from moral motives alone, that is cases unaccompanied by a pathological condition of the brain, there is always, in our opinion, a motive more or less defined; it may be of anger, pride, jealousy, or a desire to escape from the ills of life, and when a motive does not exist, it is reasonable to attribute the act to disease. This disease may be unobserved. There are many people engaged in the

pursuit of their ordinary occupation, moving along in the even tenor of their ways, totally unsuspected of any mental disturbance, and who might complete their journey of life unsuspected but for some overt act which calls more careful attention to their daily walk and conversation. An interesting case is related as occurring in France, of a man who for over twenty years filled a responsible position under the government with great skill, so much so that he was several times promoted as a reward for his assiduity, his immediate superior in office visited him at regular intervals, and on the occasion of one of the visits, the man shot him dead and immediately killed himself. Their relations had always been agreeable, and the affairs of his office were found to be in perfect condition, but among his papers were found a diary and other writings giving unmistakeable evidence of delusional insanity of many years standing.

The suicidal impulse may be excited in persons predisposed to it by some surrounding circumstances, such as the sight of murderous weapons, standing on the edge of precipices, etc. Most of us have doubtless met with people perfectly sane, whose emotions are so easily aroused that they feel, under certain circumstances, an impulse to self-destruction very difficult to control. We know a legal gentleman distinguished for his great mental ability, who cannot stand at the stern of a vessel in motion and watch the agitation of the water without feeling an almost irresistible impulse to jump over. We have met many persons who cannot ascend a high tower or go to the verge of a precipice and look down, without feeling an intense desire to jump off. In any of these cases let any circumstance hold the intellectual powers of the man at abeyance for a single moment and the suicidal act will be the result.

The suicidal impulse is frequently hereditary. Dr. Rush tells us of a family in which the mother committed suicide, and the two daughters and two sons followed her example. We are told of another family in which the great grandfather, grandfather and father committed suicide.

If the case of Mr. A. B. is tried by the description above

given, it will be found to present a sufficient number of symptoms therein described to warrant the diagnosis of suicidal melancholia. The case also directs our attention to the medico-legal relations of this form of insanity.

The courts have established the rule that suicide is a *felo de se* when committed voluntarily by a person who is in the possession of his ordinary reasoning faculties. It then avoids the policy according to the express stipulations of the contract of insurance. The courts very correctly refuse to recognize it as conclusive evidence of insanity, but very greatly err in considering it as the act of a sane and rational mind unless preceded by manifest insanity. The whole subject of the medico-legal relations of the insane has been invested with a dense net-work of unreasonable technicalities and traditional notions. Tests of responsibility have been thrust upon us that fail to recognize the wonderful advance that has been made in the pathology and treatment of insanity, and are made infallible guides in all cases. The insane man is expected to reason correctly upon the questions of right and wrong, to form his conclusions upon the same general principles, and in the same general manner that the sane man does. Equity and common sense have frequently been sacrificed upon the altar of tradition. We are told by jurists that the insane man who commits a crime must be punished to deter other insane men from committing criminal acts, thereby proclaiming that the insane are capable of the same correct intellectual judgment and moral perception that the sane are. In our humble judgment, on the contrary, the execution of every insane man in the world but one, for homicide, would not in the slightest degree deter the one from committing the same act should he be seized with the homicidal impulse.

The celebrated case of *Borradaile v. Hunter*, in many respects similar to the one above described, furnished for many years the rules of law governing all such cases. In this the jury found that the assured voluntarily took his own life, intending so to do, but that at the time of the act he was not capable of judging between right and wrong. Judgment went for the defendant, which was sustained upon appeal to

the full bench—thus establishing the remarkable rule that a man who is incapable of judging between right and wrong should be held responsible for criminal acts; a rule, in our opinion, very far removed from equity and common sense. Judge Hopkins showed, in the present case, by giving to the jury the instructions and rules contained in the opinion rendered by Judge Hunt in the case before stated, a much more humane and enlightened appreciation of the peculiarities of the insane mind. This opinion of Mr. Justice Hunt declares, first, that the act of suicide must not only be intentional, but the person committing it must be in the possession of his ordinary reasoning faculties to make it avoid the policy; second, that the death may be the voluntary act of the assured, he knowing and intending that death should be the result of the act, yet he is not responsible if his reasoning faculties are so far impaired that he is not able to understand the moral character, the general nature, consequences and effect of the act; and third, that the man is not responsible if he was impelled to the suicide by an insane impulse.

The liberality of the opinion consists in its first and second declarations, which virtually set aside the judgment in the *Borradaile v. Hunter* case, by declaring that suicide may be a voluntary act in all respects and yet carry with it no criminal responsibility. When we consider this opinion in comparison with those previously uttered, we are struck with its great liberality and advancement, and are encouraged with the hope that the day is not far distant when all the courts will abandon the traditions that now invest them when considering the medico-legal relations of the insane, and will weigh each case in the balance of equity by itself, without any arbitrary tests of responsibility to complicate the calculation, and will unhesitatingly relieve from criminal responsibility all cases of insanity that eventuate in suicide. *

THE MORTALITY OF SURGICAL OPERATIONS IN THE UPPER LAKE STATES, COMPARED WITH THAT OF OTHER REGIONS.

By EDMUND ANDREWS, A.M., M.D.,

PROFESSOR OF PRINCIPLES AND PRACTICE OF SURGERY IN CHICAGO MEDICAL COLLEGE,

ASSISTED BY THOS. B. LACEY, M.D.,

ASSISTANT SURGEON IN THE NATIONAL SOLDIERS' HOME.

(Continued.)

OPINIONS OF AUTHORS AND CONCLUSIONS.

The great authorities on surgery, give us almost no advice about the particular indications for amputation of the arm, but fall back on the established general principles, which are these :

1. The superior extremity is of more value than the inferior, and should be sacrificed with more reluctance.

2. Gangrene and diseases of its joints are less dangerous than in the inferior extremity ; hence in certain cases it is less perilous to delay the operation, until its necessity is fully proved.

3. The principal causes requiring amputation of the arm are : first, injuries, where the part of the limb below is pulseless and dead ; secondly, where gangrene from disease has destroyed the limb ; thirdly, where cancer of the member is so situated as to be incapable of full extirpation without amputation.

Severe compound and comminuted fractures of the shaft of the humerus and even of the elbow or the shoulder, do not require amputation, if there is circulation in the part below. Extensive laceration of the soft parts with comminution of the bone makes no difference. Modern surgeons are not appalled by the ghastly looks of the wound. The bone and all the skin and muscles may be severed, but if the artery, and some of the nerves and veins are left, the limb may usually be saved.

In like manner, no one now thinks of amputating the arm for caries of the joints, nor for necrosis of the shaft of the humerus, unless some special circumstances render it necessary to disregard the usual principles.

In short, the conservative surgeons have largely won the day, so far as the superior extremity is concerned. At the same time the amputations, if required, are far less dangerous than those of the lower extremity. The primary operations are a little less fatal than the secondary, and the pathological ones (amputations of complaisance excepted) are less than half as dangerous as the traumatic. The mortality of all amputations of the arm in the Lake States is, taking all kinds together, only 11 per cent., which is about one-third the mortality abroad.

Demme, Stromeyer, and Max Schmidt (Schmidt's *Jahrbücher*, 1872,) agree that in gunshot wounds of the elbow joint, conservative treatment is four times more dangerous than resection, while amputation of the arm is intermediate between them. They recommend the conservative treatment, therefore, for mild cases only, and amputation only for cases not admitting of resection. Legouest, (*Traité de Chirurgie d' Armée*, p. 530,) says, speaking of military surgery, "When the elbow has received a comminuted fracture, and the brachial artery is opened, it is necessary to amputate the arm immediately." In my opinion this should depend on whether the collateral circulation keeps up the supply of blood. If it does, and if some of the large nerves are also intact, resection should be preferred.

AMPUTATIONS AT THE ELBOW JOINT.

Of these I find only two Lake State cases, both of which recovered.

TABLE V.

AMPUTATION AT THE ELBOW JOINT.

OPERATOR.	REASON FOR OPERATION.	Complications	Time.	Result.	Practice.
Dr. E. Andrews	Mortification forearm after wound	None	Second'y	Recover.	Priv. pr.
Cook Co. Hosp.	Not stated	Not stat.	Primary	"	Hosp...
opr. not stated					

No conclusions can be drawn from so small a number.

The operation abroad seems equally rare, so that the entire literature of surgery does not furnish us the means of comparing primary, secondary and pathological cases. I find only the following records :

AUTHORITIES.	CASES.	DEATHS.
Pennsylvania Hospital.....	1	0
Dr. Herrgalt, Siege of Strasburg, 1870-71.....	2	2
Other reports in Franco-German War, Deutsch. Zeit. für Chirurgie, B. II, S. 105.....	11	6
Circular No. 6, Surg. Gen. U. S. Army.....	19	0
Statist. des Hôp. de Paris, 1861-2-3.....	4	2
Guy's Hosp. Reports.....	1	0
Leeds' Gen. Infirmary, Mr. Nunneley.....	20	1
Zurich Hosp., 1860-67, Arch. Klin. Chir., Bd. X., S. 891.....	2	1
Deutsch. Zeit. für Chir., Bd. II., S. 380.....	1	1
Totals.....	61	13

Mortality, 21 per cent.

This gives fifteen per cent. better results than amputation of the arm, so that it would seem it should be preferred to the latter whenever the choice of location is offered.

OPINIONS OF AUTHORS AND CONCLUSIONS.

Expectant treatment of gunshot wounds of the elbow is to be advised only in the slightest cases. The statistics of the Med. and Surg. History of the War of the Rebellion, p. 829, part II, Surg. Vol., give 938 cases treated conservatively, with only 10 per cent. of deaths ;

but a great number of these were trivial wounds, and not at all to be classed with those where a bullet had gone through the interior of the joint. I think that in the latter class expectant treatment would be the most dangerous of all procedures.

Amputation at the elbow was first done by Paré, and improved by Brasdor. It gave rise to great differences of opinion among eminent men.

Those opposing or discouraging it are Boyer, Richerand, J. Cloquet, T. J. Roux, (the latter very bitterly,) Chelius (Chelius' Surg., vol. III, p. 718), and Henry H. Smith (Smith's Surg., vol. II, p. 689).

On the other hand, we have in favor of it, Brasdor, Velpeau, Dupuytren, Malgaigne, Legouest, Hamilton, Gross, and Bryant.

Gross speaks of the operation in very high terms, both as to safety and excellence of the stump. (Gross' Syst. of Surg., vol. II, p. 1110.)

Bryant of England, also praises it in the highest terms. (Bryant's Surg., p. 953.)

It is evident that the weight of authority among living surgeons is decidedly in favor of the operation. It should not be substituted for excision, but when an amputation is inevitable, and there is room for a choice of location, the elbow is to be preferred to any point above it.

AMPUTATION OF THE FOREARM.

Owing to the success and safety of conservative treatment of the forearm, amputations of this segment are comparatively rare. I have obtained records of only 20 cases in the Lake States, which are here subjoined :

TABLE VI.
AMPUTATION OF THE FOREARM.

OPERATOR.	Age.	REASON FOR OPERATION.	COMPLICATIONS.	Operati'n	Con- diti'n	Time.	Result.	Time to discharge.	Time to Practice.
Dr. J. H. Hollister	30	Forearm crushed by cars.	Intemperate		Good	Primary	Recovered		Hosp.
" "	"	Gunshot wound of forearm.	"		"	"	"		"
" E. Andrews	22	Injury by R. R.	None	Circular	"	"	"	2 mos.	"
" "	"	Gangrene of crushed hand.	"	"	"	Secondary	"	6 weeks.	Priv. pra.
" "	"	Injured by cars.	"	"	"	Primary	"	28 days.	Hosp.
" "	70	Wrist crushed by scapula.	None	"	Bad	"	"	70 "	"
" J. H. Hollister	19	Wrist crushed by scapula.	"	"	Good	Primary	"	"	Priv. pra.
" "	30	Wrist severed by sharp instrument.	"	"	"	"	"	"	"
Cook Co. Hosp.	"	Disease of parts	"	"	"	"	"	"	Hosp.
Dr. H. Wardner	33	Hand crushed in foundry.	Considerable shock	Low. 3	Med.	Primary	Died	"	"
" "	30	" " on boat.	"	Mid. 3	"	"	Recovered	3 1/2 wks.	Priv. pra.
" E. D. Kittoe	22	Hand and forearm crushed in thresh. mach.	"	Low. 3	Bad	18 hours	"	3 mos.	"
" "	50	Scirrhus of hand.	" Intem. 3	"	"	2 years	"	"	"
" E. W. Lee	8	Comp. tract. forearm	Scirrhus of lip removed 3	Flap. 3	Good	Primary	"	3 weeks.	"
" "	20	Hand crushed	"	Low. 3	"	"	"	4 "	"
" S. S. Bedal	45	Comp. and com. fract.	None	Cir. low 3	"	"	"	"	"
" "	28	Hand crushed	"	Upper 3d	"	Secondary	"	3 weeks.	Hosp.
" Marks	50	Erysipelas and gangrene.	"	Upper 3d	Bad	4 weeks.	Died	12 days	Priv. pra.

SURGICAL OPERATIONS IN UPPER LAKE STATES. 705

RECAPITULATION.

	CASES.	DEATHS.	PER CT. MORT.
Total number	20	2	10
Traumatic Primary	14	0	0
" Secondary	2	0	0
Pathological	4	2	50
Hospital Cases	9	1	11
Private Practice	11	1	9

AMPUTATION OF THE FOREARM ABROAD.

The following are the principal published records of this operation :

TRAUMATIC PRIMARY.

AUTHORITIES.	CASES.	DEATHS.
Med. & Surg. Hist. War of Rebel., Surg. Vol., Part II., p. 967	1,007	97
New York Hosp., reported by Sir J. Y. Simpson	10	2
Pennsylvania Hosp., " "	83	5
Boston City Hosp., Dr. Cheever	9	0
Mass. Gen. Hosp., reported by Sir J. Y. Simpson	29	7
Guy's Hosp., London	16	1
St. Bartholomew's Hosp., London, 1853 to 1871	48	2
St. George's " "	1	0
U. S. Marine Hosp.	1	0
Dr. Herrgalt, Strasburg, French and German War	4	0
Dr. Beck, Austrian and Prussian War	3	0
Leeds Gen. Infirmary, Mr. Nunneley	60	4
Siege of Antwerp, Schmidt's Jahrbücher, B. 136	6	1
Crimean War, " "	175	35
German-French War, " "	10	2
Dr. E. Warren's Surg., p. 396, Confederate Army	23	2
British Mil. Hosp. in Brussels, 1815, Guthrie	22	1
Totals,	1,507	159

Mortality, 11 per cent.

TRAUMATIC INTERMEDIARY.

AUTHORITIES.	CASES.	DEATHS.
Med. & Surg. Hist. War of Rebel., Surg. Vol., Part II., p. 967,	450	106

Mortality, 23 per cent.

INTERMEDIARY AND SECONDARY CASES COMBINED.

AUTHORITIES.	CASES.	DEATHS.
Boston City Hosp., Dr. Cheever.....	2	0
New York " Works of Sir J. Y. Simpson.....	3	1
Pennsylvania " " " " ".....	11	4
Mass. Gen. " " " " ".....	12	2
Guy's " London.....	1	0
St. Thomas' " ".....	1	0
St. Bartholomew's Hosp., London, 1853-71.....	14	2
St. George's " ".....	1	0
Chinese Missionary ".....	1	0
Geissel in French and German War.....	5	0
Beck in Austrian and Prussian War.....	5	1
Crimean War, Schmidt's Jahrbücher, B. 136.....	96	56
German-French War, ".....	2	2
Dr. E. Warren's Surgery, p. 396, Confederate Army.....	22	4
British Mil. Hosp. in Brussels, 1815, Guthrie.....	17	5
Totals.....	193	77

Mortality, 40 per cent.

PURELY SECONDARY (AFTER INTERMEDIARY PERIOD).

AUTHORITY.	CASES.	DEATHS.
Med. & Surg. Hist. War of Rebel., Surg. Vol., Part II, p. 967,	184	29

Mortality, 16 per cent.

PATHOLOGICAL CASES.

AUTHORITIES.	CASES.	DEATHS.
Boston City Hospital, Statement of Sir. J. Y. Simpson.....	6	2
New York Hospital, " " " ".....	7	2
Pennsylvania " " " ".....	6	0
Mass. Gen. " " " ".....	27	4
Edinburg Infirmary, 1859-68.....	7	3
Glasgow " 1847-68.....	23	6
St. George's Hospital, London, 1864-68.....	8	4
Guy's " " 1861-68.....	13	5
London " " 1862-68.....	5	0
Middlesex " " 1867-68.....	1	1
King's College " " 1863-68.....	1	1
Royal Free " " 1862-68.....	1	1
Westminister " ".....	4	1
St. Thomas " ".....	2	0
St. Bartholomew's " 1853-71.....	18	1
Leeds Gen. Infirmary, Statem't of Mr. Nunneley.....	21	3
Billroth's Practice.....	4	2
Other European Cases.....	8	0
Totals.....	162	36

Mortality, 22 per cent.

GENERAL SUMMARY OF AMPUTATION OF THE FOREARM ABROAD.

	CASES.	DEATHS.	PER CENT. MORT.
Traumatic, primary	1,507	159	11
" intermediary	450	106	23
Intermediary and secondary combined	193	77	40
Purely secondary	184	29	16
Pathological	162	36	22
Totals	2,496	407	16

Mortality in the Lake States, 10 per cent.

It appears, therefore, that the mortality of this operation among us is less than two-thirds that of the published statistics.

OPINIONS OF AUTHORS AND CONCLUSIONS.

Authors have very little to say on the indications for amputation of the forearm, except to apply the following principles :

1. Conservative treatment is very safe.
2. The arteries and nerves pass down in several trunks, so that they are seldom all destroyed at once.
3. Artificial hands are of very little practical use.

Acting on these truths, surgeons rarely amputate the forearm, except for some injury which has already destroyed the life of the member, or some disease like cancer, which cannot be otherwise gotten rid of. In all severe compound fractures, gunshot wounds, etc., in which there is the least ground of hope that the circulation may recover itself, the effort is made to save the limb. Conservative treatment in the forearm and hand is carried to its fullest extent.

Legouest (*Chirurg. d'Armée*, p 350,) says, that when a bullet traverses the wrist in its greatest diameter, with great shattering, amputation of the forearm will be required.

AMPUTATIONS OF THE WRIST AND HAND IN THE LAKE STATES.

Of these, I find records of only eight cases, all of which recovered.

AMPUTATIONS AT THE WRIST JOINT—ABROAD.

TRAUMATIC PRIMARY.

AUTHORITIES.	CASES.	DEATHS.
Med. & Surg. Hist. War of Rebel., Surg. Vol., Part II, p. 1018	54	5
Pennsylvania Hospital.....	8	0
Dr. Herrgalt, in Strasburg.....	2	0
Leeds General Infirmary, Mr. Nunneley.....	102	8
Siege of Antwerp, Schmidt's Jahrbücher, p. 156.....	1	1
Totals.....	167	14

Mortality, 8 per cent.

TRAUMATIC INTERMEDIARY.

AUTHORITY.	CASES.	DEATHS.
Med. & Surg. Hist. War of Rebel., Surg. Vol., Part II, p. 1018,	7	1

Mortality, 14 per cent.

PURELY SECONDARY (AFTER INTERMEDIARY PERIOD).

AUTHORITY.	CASES.	DEATHS.
Med. & Surg. Hist. War of Rebel., Surg. Vol., Part II, p. 1018,	5	1

Mortality, 20 per cent.

TRAUMATIC, TIME NOT STATED.

AUTHORITIES.	CASES.	DEATHS.
German Authors.....	2	1
U. S. Marine Hospital.....	1	0
Crimean War, Schmidt's Jahrbücher, p. 156.....	67	27
Italian War, " " ".....	13	6
German-French War, Schmidt's " ".....	8	0
Totals.....	91	34

Mortality, 37 per cent.

This increased mortality, as compared with that of the cases known to be primary, may be due to the fact that

the second list is mainly made up of military cases, many of which had other injuries to determine a fatal result, yet it seems impossible to make any satisfactory solution of such palpable discrepancies.

PATHOLOGICAL CASES.

Cases, 14.

Deaths, 1.

Mortality, 7 per cent.

GENERAL SUMMARY OF AMPUTATIONS OF THE WRIST.

LAKE STATES.

Eight cases.

No deaths.

ABROAD.

	CASES.	DEATHS.	PER CENT. MORT.
Primary	167	14	8
Intermediary	7	1	14
Purely secondary	5	1	20
Time not stated	91	34	37
Pathological	14	1	7
Totals,	284	51	18

OPINIONS OF AUTHORS.

Legouest and Albert Malinas, in a work entitled "Conservation," etc., advise conservative treatment in gunshot fractures of the wrist, and, in support of their opinion, give the following facts, on gunshot wounds of this articulation :

	MORTALITY OF CONSERVATIVE TREATMENT.	MORTALITY OF AMPUTATION.
Crimean War	11	28
Italian War	18	25 to 46

Legouest says (*Chirurgie d'Armée*, p. 530) that amputation at the wrist is only required when the injury to the hand is such as to destroy the hope of any future use of it.

Joseph Lister, in Holmes' System of Surgery, vol. V., p. 655, rather discourages the operation, and thinks it no better than amputation of the forearm.

Gross, on the other hand, in his System of Surgery, vol. II., p. 1108, thinks it preferable by far to amputation of the forearm.

Erichsen says it is not often required.

Ashurst's Surgery, p. 115, says if it is done, the disarticulation should be at the radio-carpal junction.

Vidal (Pathologie Externe, Tome V., p. 646) approves the operation in suitable cases.

It appears, therefore, that authors conflict somewhat in their opinions of the operation, without any decisive scientific proof on either side. The statistics too are in hopeless contradiction. The Crimean war is said to have given a mortality of 28 per cent.; the Italian war is stated variously from 13 to 46 per cent., and the late American war at only 5 per cent. No results can be deduced from such utterly irreconcilable statements. Science must wait for a better collection of facts.

AMPUTATIONS THROUGH THE METACARPUS.

No records for the Lake States. Abroad, seventy-six cases are recorded without a death.

AMPUTATION AT THE HIP JOINT.

Of this important operation I obtain records of the following seven cases in the Lake States:

RECAPITULATION.

Total number of cases	7	Died.....	3
Traumatic	2	"	1
Pathological	5	"	2

AMPUTATION OF THE HIP JOINT ABROAD.

The Surgeon-General of the U. S. Army, in Circular No. 2, publishes a report of Asst. Surg. Geo. A. Otis, M. D., which carefully collects the published cases of the world up to 1869 (Cir. No. 2, S. G. O.), so far as performed for gunshot wounds. Of these, 115 were in the Crimean and other foreign wars; 62 were in the American war, and 6 were later cases. Asst. Surg. Otis gives in Circular No. 2, p. 112, the following condensation of the whole:

AMPUTATIONS AT THE HIP JOINT FOR GUNSHOT WOUNDS ABROAD.

	CASES.	DIED.	PER CENT. MORTALITY.
Primary (finished cases)	76	75	99
Intermediary	76	70	92
Secondary (after intermediary)	20	13	65
Re-amputations	8	4	50
Totals	180	162	90

The New York, Boston and Mass. general hospitals give five traumatic primary cases, all fatal.

AMPUTATION AT THE HIP JOINT FOR PATHOLOGICAL CAUSES.

AUTHORITIES.	CASES.	DIED.
Lake State Surgeons (see table No. VII. above)	5	2
Guy's Hosp. Reports	1	1
St. Thomas' Hosp. Reports	2	0
St. Bartholomew's Hosp., 1853 to 1863, Mr. Callender	1	0
Statist des Hôpit. de Paris, 1861-2-3	3	3
Mass. Gen. Hosp.	2	2
Leed's Gen. Infirmary, Mr. Nunneley	2	1
Ashurst's Surgery, p. 131	42	18
Totals	58	27

Mortality in pathological cases, 47 per cent.

OPINIONS OF AUTHORS AND CONCLUSIONS.

Opinions on this amputation have formerly been widely conflicting, but as statistics have accumulated and thrown light on its results, a greater degree of unanimity has been attained.

In 1740, the Academy of Surgery in Paris opposed the operation, when one of its members wished to perform it. In 1848 they approved it. In 1859 they again discussed it, and of forty-four opinions, thirty-four justified it. (*Pathologie Externe par Vidal, Tome V., p. 703.*)

Chelius, vol. III., p. 689, justifies it when a crushing or mortification extends so high as to prohibit amputation below the trochanter.

Stromeier (*Maximen der Kriegsheilkunst*) declared in 1861 that it was not yet proved justifiable in military surgery.

Loeffler (*Grundsätze und Regehr für die Behandlung dèr Schusswunden im Kriege*) took similar ground. Rochard, in Saurel's *Traité de Chirurgie Navale*, pronounced it improper in the primary stage, and Sedillot maintained for years that the primary amputation was never successful.

Baron H. Larrey and M. Legouest (*Memoires de la Societé de Chirurgie, Tome V.*) obtained a definite opinion from the Society of Surgery, that the operation was unjustifiable unless the thigh was almost torn away from the trunk.

Erichsen's Surgery, vol. II., p. 301, seems to speak rather flippantly and without consideration of the terrible danger of the operation. It advocates it, not only where the disease of the femur is too extensive for excision, but even for limbs rendered simply useless by atrophy, deformity, etc. Curiously enough, in disregard of the fact that amputation is more dangerous than excision, the author recommends it as a choice, where the health is supposed to be too low to bear the excision.

Joseph Lister, in Holmes' System of Surgery, vol. V., p. 651, says it is justifiable in some desperate circumstances.

Henry H. Smith (Prin. and Pract. of Surg., vol. II., p. 694,) assumes that it may be required, and forbids the circular operation as specially objectionable.

Gross (System of Surgery, vol. II., p. 1127,) says, amputa-

tion at the hip is never to be undertaken except where there is no other chance of life.

Asst. Surg. Geo. A. Otis, M. D., the author of Circular No. 2, S. G. O., after a careful survey of the war records, and of European opinions and military experience, arrives for gunshot cases at the following conclusions (Cir. No. 2, pp. 122, 123):

"Amputation at the hip joint, for gunshot injury, notwithstanding its great fatality, cannot be altogether discarded, and should be performed under the following circumstances: 1. When the thigh is torn off, or the upper extremity of the femur comminuted with great laceration of the soft parts, in such proximity to the trunk that amputation in the continuity is impracticable. 2. When a fracture of the head, neck or trochanter of the femur is complicated with wound of the femoral vessels. 3. When a gunshot fracture, involving the hip joint, is complicated by a severe compound fracture of the limb lower down, or by a wound of the knee joint.

"There are two other possible contingencies under which primary or early intermediate coxofemoral amputations for injury may be admissible: 1. When, without fracture, a ball divides the femoral artery and vein near the crural arch. 2. When a gunshot fracture in the trochanteric region is complicated by such extensive longitudinal fissuring as to preclude excision. Experience has yet determined nothing on these points. Secondary amputations and re-amputations at the hip, in military surgery, should be performed when, from caries, or necrosis, or chronic osteomyelitis following gunshot wounds, or amputations in the continuity, the patient's life is in jeopardy.

"Restricted to the classes of cases above enumerated, coxo-femoral amputation will occasionally save lives that would otherwise be inevitably lost.

"Primary excisions of the head or upper extremity of the femur, should be performed in all uncomplicated cases of gunshot fracture of the head or neck. Intermediate excisions are indicated in similar cases where the diagnosis is not made out till late, and also in cases of gunshot fracture of the trochanters with consecutive arthritis. Secondary excisions are

demanding by caries of the head of the femur, or secondary involvement of the joints, resulting from fractures in the trochanteric region or wounds of the soft parts in the immediate vicinity of the joint.

"Expectant treatment is to be condemned in all cases in which the diagnosis of direct injury to the articulation can be clearly established.

"Although the great majority of cases complicated by lesions of the pelvis terminate fatally, the successful operation of Dr. Schönborn proves that a slight injury of the margin of the acetabulum does not contra-indicate the operation of excision.

"Experience teaches that considerable portions of the shaft may be with propriety removed with the head, neck and trochanters, in cases in which splintering extends below the trochanter minor."

In the light of all the known facts, I think that these remarks of Dr. Otis are the best considered, and most carefully stated conclusions ever made, up to the time they were penned, and that to a certain extent they are applicable to other traumatic cases.

Since they were written, however, the whole system of treating wounded joints by antiseptic methods has been developed, and the question has arisen whether a certain number of shattered hips heretofore deemed to require amputation or excision would be better treated by laying open the joint freely, removing dead fragments, and treating by Lister's antiseptic methods. Probably they would, but science has not yet given the means of a positive answer, so that a painful darkness still hangs over some portions of the subject of hip joint injuries. The antiseptic consideration, however, would affect the question of excision more than that of amputation, as at the present time few would think of amputating at the hip for recent injuries, unless the limb were destroyed, or gangrene inevitable, and therefor antiseptic treatment out of the question.

There is yet one other condition in which antiseptic method might possibly come in to postpone or supersede amputation in a few rare cases. If the limb is carried away by a shot, too high for amputation below the trochanter, it has been deemed

unavoidable that the patient must take the added terrible shock of a primary amputation at the hip, though his chance of surviving it is not over one in a hundred. The antiseptic method enables us in most cases to promptly subdue the local inflammation, and to completely suppress the exhausting drainage of suppuration, so that some of these cases might probably be better treated by this plan, and thus either healing the parts by granulation without operation, or else postponing the amputation to a late secondary period, when it is much safer. This principle has proved abundantly successful in some parts of the body, but there is no recorded experience of its application to hip joint wounds.

The principal pathological indication for this amputation has hitherto been cancer of the thigh, so situated as to admit of complete removal in no other way. Some instances are on record where it has been successfully done and the patient lived in comfort for years, though perhaps there may be doubt about the correctness of the diagnosis in a part of them. The whole thing lies in a nutshell. If the tumor is really malignant, there is no reasonable expectation of a permanent cure, and as pathological amputations have a mortality of 47 per cent., they have about one chance in two of killing the patient at once. The question therefore is this: Granted that there is no rational expectation of a permanent cure, and only a moderate hope of prolonging the life, is an operation, which kills immediately one-half the patients, desirable? It is evident that the prospect is greater for shortening than for lengthening the life by the operation, in such circumstances. It would seem to be justified, therefore, only in those cases where the terrible pains of the disease call for operative relief, at almost any risk.

Caries extending far down the femur, can hardly be called an indication for amputation at the hip, now that we understand the value of subperiosteal excision of bony shafts.

(To be Continued.)

RIGIDITY OF THE OS UTERI OVERCOME IN
OBSTETRIC PRACTICE.

A SUBSCRIBER, LAKE CITY, MINN.

I was deeply interested in an able article from the pen of Philip Adolphus, M. D., in the April number of THE CHICAGO MEDICAL JOURNAL AND EXAMINER, on the "Relative position of Chloroform, Sulphuric Ether and Sulphate of Morphia in Obstetric Practice."

For eleven years, obstetrics and diseases of women have been almost a specialty in my practice; and for the past two years I have entirely discontinued the use of chloroform, with one exceptional case, considering chloral hydrate in every way preferable. Taken in combination with Doveri pulv., or liq. Doveri, I have overcome the (apparently) most obstinate cases of rigidity of the os uteri.

The exceptional case, in which I tried to administer chloroform, was that of a lady twenty-seven years of age pregnant with her third child. The husband came in great haste, saying his wife was flowing to death, and was delirious, with incessant pain. I had attended the lady in both her previous confinements, and she had no unusual amount of suffering nor abnormal symptoms. At this time, I found her delirious and in irregular spasms. Attempted the administration of chloroform, but owing to the dusky appearance of the countenance, and impeded respiration, had to desist. On digital examination, found os uteri rigid and dilated, but sufficient to admit tip of index finger. With every pain, which was as often as three, and two and a half minutes, was a profuse gush of blood. Gave $\mathfrak{z}\text{j}$ of Squibb's fld. ex. ergota, chloral hydr. grs. x. In fifteen minutes the pains were less convulsive and frequent, and flow greatly moderated. But the rigidity of os remaining the same, and pains occurring every five minutes, with no perceptible increase of dilation, gave Dover's pulv. in connection with chloral hydr. I have *never* failed, in using this remedy, and think it preferable to morphia, as consciousness and sensibility are not destroyed, and it has the relaxing

properties of the ipecac. After giving two doses of the following formula: chloral hydrate, 3 j; liq. Doveri, 3 jss; syr. cinn. 5 j; M. sig. a teaspoonful, at intervals of thirty minutes, the attendants ceased controlling the lady's movements and she broke out into a profuse perspiration, at the same time quietly sleeping between the pains. In one hour, gave the third and last dose (I rarely give over two). In twenty minutes following, after a pain from which she indifferently roused, she said, "there, Dr." I slipped my hand under the sheet and found on the bed a five and a half month's fœtus, with membranes entire and unruptured, and lady had not changed her position, and continued to sleep sweetly. She made a good recovery; had abundance of milk without any febrile symptoms.

In former years, found ipecac pulv. grs. ij. every twenty minutes good in relaxing the rigidity of os uteri, especially in primipara labors; but it failed in allaying the irritability and extreme restlessness attending such cases. Even when administered with chloral hydrate, it has not the happy effect that Dover's powder has. For convenience the liq. Doveri (m. j, being equal to gr. j pulv.) is preferred. Where there are no spasmodic symptoms, the Dover's powder is sufficient *without the chloral*, and I prefer to use it so; and in using it have no occasion for ergota except to control hemorrhage, *i. e.* in uncomplicated rigidity of os uterus. If pains are *inefficient* I substitute quinia for ergota. And in using the chloral hydr. and liq. Doveri combined, have not needed instrumental assistance, on an average once in five hundred cases—in fact, never with a normal pelvis.

Was called to a primipara labor, as was supposed. Lady in spasms, face contorted and tongue filling the mouth, which was partly open and drawn to one side. Administered 3 ij of pres. per rectum. Examined and found os rigid with no dilation perceptible. In twenty minutes the lady called for a drink of water, and seeing me, said, "Dr., am I going to be sick?" I inquired as to pain—she had had no pain, bowels free, appetite good, but could not sleep. Ordered the prescription every four hours, with warm foot bath. She continued the medicine for seven days, saying, "As long as I take the medi-

cine I am all right, but if I go over the four hours the spells come on." At the expiration of seven days was sent for—she met me smiling, and said, "I feel some pain, but not very bad, in my back." In one hour she was delivered of a fine boy, average weight, and her first expression was, "I was not *much* sick after all." Continued the medicine three days—made a good recovery.

It is unnecessary to relate instances, but the fact is before me all the time, not only in parturition, but in my office practice, for the advantages of exploration, removal of polypi or other uterine tumors, the relaxing and sustaining properties of Dover's powder, with or without chloral hydr., as the case requires, are almost indispensable. It does not interfere with the appetite, and seldom with digestion, and its relaxing properties extend to the sphincter vaginae, and with the usual support *I never have had a lacerated perinaeum*. And there is no excitement, congestion nor increased circulation, but labor is made endurable, shorter, safer and more satisfactory. After-pains are controlled, and no complications of inflammations or lacerations as a sequel. Idiosyncrasy precluding opium, or morphia, will accept gratefully DOVER'S POWDER.

CASE OF MONSTROSITY.

By DR. C. PAUL SIMON, CHICAGO.

(Reported to the Chicago Society of Physicians and Surgeons.)

This monstrosity, which I saw with Dr. Landis, sen., of this city, was born illegitimately during the month of April of the present year, in North Chicago, of a woman aged twenty, of German origin, in the seventh month of pregnancy. It belongs to the class of double monsters (*Monstres Doubles autositaires*, of *Isid. Geoffroy, St. Hilaire*) having a common cord and connected by means of the abdominal walls, and may be called *omphalopagus abdominalis*. Both were females, facing each other, and apparently of the same development. The connection equalled in thickness the width of the body,

and extended from the processus xiphoideus to within a few inches above the pubis, where the cord was attached on one side. The one died shortly after birth, but other lived for about thirty-six hours, her bowels moving in the meantime. A difference of temperature could be detected with the hand immediately on both sides of what should be the common linea alba. No trial of division, and later no examination after death, were allowed.

This case is analogous to that of the Siamese twins, where the cord was common and the connection occurred at the place of the processus xiphoideus. (See Transactions of the College of Physicians of Philadelphia, Phil., 1875.)

EDITORS OF THE CHICAGO MEDICAL JOURNAL AND EXAMINER:

In your June number, in the report of Dr. Danforth on the Pathological Anatomy and Histology of Cholera, he speaks of "Dr. McClellan coolly ignoring the work of the Society of Physicians and Surgeons, and crediting the investigations to the Chicago Board Health."

As this places Dr. McClellan, as well as myself, in a false position, I desire to state the circumstances as they occurred.

During the epidemic of 1873 Dr. Simons was appointed Assistant Sanitary Inspector, with instructions to investigate fully the causes of the disease, and to make *post mortem* examination of all cases, when one could be obtained, as I desired to have an examination made of the specimens obtained. He was directed to do this as an employee of this Department, and not as a member of the committee. When the *post mortems* were made, he informed me that he had invited Dr. Hyde to be present, and he had conducted the examinations and had the specimens in his possession.

I then saw Dr. Danforth and requested him to make an examination, and report the same for publication in the report of the Board of Health. The Department paying all expenses connected with the examination, and retaining all the plates;

and furnishing Dr. Danforth with a number of bound copies of his report for distribution.

When Dr. McClellan was here he spoke to Dr. Danforth in my presence, in regard to inserting his report, as published in the Board of Health Report, in the work on cholera; stating that he would give Dr. Danforth credit for the same, and that this would give a larger audience than publishing the same in the MEDICAL JOURNAL.* To this Dr. Danforth assented, and if he had desired, one word from him would have given the Society all the credit that has been given to Dr. Danforth. It is true the Board of Health did not order any *post mortems*; but, as the executive officer of the Board, I did; and, in inviting Dr. Hyde to be present, Dr. Simons was acting in his official capacity, and permitted Dr. Hyde to do what he had been ordered to do. I was gratified when I learned that Dr. Hyde was present and took charge of the examinations, but did not approve of Dr. Simons' permitting him to take the specimens away with him, for by this it would appear that his first duty was to the Society, and not to the Department that was paying him for this service.

In the report of the Board of Health, which contains the report of Dr. Danforth (pages 30 to 44), due credit was given to Dr. Danforth, also to Dr. Hyde for making the *post mortems*.

If Dr. Danforth had desired the Society to have the credit instead of himself, he had access to the proofs and corrected them, why did he not made the change then? I think it illy becomes him, at this late day, to arraign Dr. McClellan for not accrediting the Society of Physicians and Surgeon with the investigations, and stating that the Board of Health had not the slightest connection with the inauguration or prosecution of these researches, and that it was done wholly under

* Dr. McClellan writes me as follows: "Dr. Danforth stated to me that the notes had been carelessly written, that he was not satisfied with them, that he would go over the entire ground, rewrite the paper and send it to me. Although I wrote him several times on the subject, and many times wrote you to see him about it, I never received one line from him or from anyone else."

the auspices of the Society of Physicians and Surgeons; when the Health Department was in constant communication with him, and paid all bills connected with the examination, and now have possession of all the plates.

Further, it illy becomes him to bring Dr. McClellan into this, when he kept the report out of the JOURNAL, and permitted Dr. McClellan to take it, not as a report of the Society, but as his report, because it would give him the greater audience.

I thank Dr. Hyde for his examinations, for they were made thoroughly; although Dr. Simons had been ordered to do the same work; and if in the Health Report Dr. Hyde has been neglected in any way I am ready to make the amende honorable. But Dr. Danforth is rather late in raking up old scores. At that time the only objection he made was that I gave him the plain title of "Dr. I. N. Danforth," and did not append his title of "Lecturer in Rush Medical College."

In conclusion permit me to say that if Dr. McClellan has done the Society any injustice, it was from want of information; seeing the report published in the Report of the Board of Health, he would naturally infer that it belonged to that Board.

While I am ready and willing to grant all the credit due to the Society, I do protest against Dr. Danforth's view of the case; for if ordering the examinations and paying for them is not having some connection with them, then publishing the report in ours, accredited to him, does not give us any connection with it.

Respectfully Yours,

BEN C. MILLER, *Sanitary Sup't.*

Reports of Societies.

EIGHTH ANNUAL MEETING OF THE ASSOCIATION OF AMERICAN MEDICAL EDITORS.

(F. H. DAVIS, Secretary.)

The members of the Association assembled in the parlor of the Centennial Hotel, in Philadelphia, on Monday, May 5, 1876.

The meeting was called to order by the president, Dr. A. N. Bell, of New York. The following members were present: Drs. Theophilus Parvin, of Ind.; Leartus Connor, of Detroit; A. C. Garrett, of Boston; Robt. Battey, of Atlanta; H. Z. Gill, of St. Louis; W. H. Byford, of Chicago; H. C. Wood, of Philadelphia; L. D. Bulkley, of New York; D. G. Brinton, of Philadelphia; W. T. Briggs, of Nashville; Thos. S. Powell, of Southern Medical Record, and A. N. Bell, of Brooklyn.

The secretary, Dr. F. H. Davis, of Chicago, read the minutes of previous meeting, which were accepted and approved. The president then delivered the annual address; this was devoted mainly to an able and eloquent appeal for a higher standard of requirement for admission to the profession of medicine in this country. The facilities offered by most of our medical colleges were abundant; but the time of attendance required of the student, two terms, of four to six months each, was absurdly insufficient to enable him to intelligently profit by the advantages offered. Dr. H. C. Wood fully endorsed the views advanced in the president's address. In the early days of medical instruction in this country the colleges attempted to teach only the fundamental branches, and those they taught well and thoroughly. Now the schools attempt to cover the whole vast field of modern medical sciences, including the various specialties, and still expect the student to comprehend all of this in the old four or six months session. The result was that the graduates of to-day went out with a superficial smattering of all, but really

thoroughly grounded in no one department. He believed in supporting Harvard and such schools as had the courage to come bodily forward and institute the reforms of a three year's graded course; uphold these institutions until their success should compel the others to follow.

Dr. Byford counseled moderation. He thought that most of the colleges were doing very well, as well as they could. Give them time enough and they would accomplish all the needed reforms. In reference to the deficiency of preliminary education on the part of medical students, he thought that the practitioners who sent these imperfectly prepared students to the colleges, were in the main responsible. Let the colleges have better material and they would turn out better educated physicians.

Dr. Palmer stated that in introducing this requirement of preliminary examination into Michigan University, they had found it necessary to reject several applicants. The preceptors of these gentlemen were very much offended, and the students easily gained admission at other schools where no such preliminary acquirements were necessary.

The question of State laws regulating the practice of medicine was discussed at some length by several members. Dr. Connor, of Detroit, said that he had taken opportunity to examine somewhat carefully the effects of the laws now in force in Canada, which require each practitioner of medicine to pass examination by a mixed board, containing representatives of the different schools of medicine, homœopathic, eclectic, etc. The result, he stated, had been that those districts were overrun with a class of unprincipled quacks and charlatans who possessed sufficient knowledge to pass the examining board, and were thus licensed to practice, and could compel recognition and admission to all medical societies, while they were under no moral or ethical restraints. Their advertisements and posters were to be seen on every lamp-post and fence corner throughout the country.

It was agreed by the members of the Association generally that the profession must establish and maintain its own requirements for admission to its ranks, and its own ethics;

also that some standard of acquirement, other than the possession of a simple college diploma, should be required for admission to the State Medical Societies and the American Medical Association.

The following resolution was offered and unanimously adopted:

Resolved, That we express our approval of such medical schools as require preliminary examinations and a three year's graded course of instruction, with stated examinations.

The Association then proceeded to the election of officers, with the following result: President, Dr. H. C. Wood, of Philadelphia; permanent secretary, Dr. F. H. Davis, of Chicago.

The meeting then adjourned to the evening preceding the next annual meeting of the American Medical Association.

PROCEEDINGS OF THE ASSOCIATION OF THE REPRESENTATIVES OF AMERICAN MEDICAL COLLEGES, HELD AT PHILADELPHIA, JUNE 2 AND 3, 1876.

A convention of representative of numerous medical colleges of the United States was held in the hall of the Jefferson Medical College, of Philadelphia, June 2 and 3, 1876, in pursuance of the following call:

LOUISVILLE, KY., May 15, 1876.

Following a general correspondence with the various medical colleges of the United States, the undersigned issue this call for a convention, to be held in Philadelphia, on Friday, June 2, 1876, four days in advance of the meeting of the American Medical Association. The object of the convention is to consider all matters relating to reform in medical college work.

That decided results may be reached, the faculty of each college is requested to send one or more delegates, clothed with *plenary* powers to determine final action on every question.

Should any college find it impracticable to send a representative, it is hoped that it will set forth fully, by letter to the

convention, the views it may hold touching the suppression of existing evils and methods of practical improvement.

Officers of the following colleges have informally signified their hearty approval of the movement:

Jefferson Medical College, College of Physicians and Surgeons, N. Y., Bellevue Hospital Medical College, Ohio Medical College, Miami Medical College, Rush Medical College, Detroit Medical College, Louisville Hospital Medical College, Medical Department of University of Louisville, St. Louis Medical College, Keokuk Medical College, Cleveland Medical College, Starling Medical College, Medical Department of Georgetown College, Medical Department of Columbian University, Long Island College Hospital, Medical Department of Syracuse University, Evansville Medical College, Indiana Medical College, Medical Department of University of Nashville, Atlanta Medical College, Mobile Medical College, Savannah Medical College, Augusta Medical College.

The convention will be called to order in the hall of the Jefferson Medical College, at eleven o'clock A. M., on the day above named.

J. B. BIDDLE, M. D., Jefferson Medical College.

WM. H. MUSSEY, M. D., Miami Medical College.

JOHN T. HODGEN, M. D., St. Louis Medical College.

J. ADAMS ALLEN, M. D., Rush Medical College.

W. T. BRIGGS, M. D., Med. Dep't Univ'ty of Nashville.

J. M. BODINE, M. D., Med. Dep't Univ'ty of Louisville.

At the hour named the following representatives assembled;
Jefferson Medical College—Prof. J. B. Biddle and Prof. S.

D. Gross.

Medical Department University of Pennsylvania—Prof. R. E. Rogers.

College Physicians and Surgeons of New York—Prof. Edward Curtis.

Medical Department University of Louisville—Prof. L. P. Yandell, Jr., and Prof. J. M. Bodine.

Hospital College of Medicine of Louisville—Prof. J. A. Larrabee and Prof. T. C. Wilson.

Long Island Hospital Medical College—Prof. J. H. Raymond.

Medical Department University of Iowa—Prof. E. Clapp.

College of Physicians and Surgeons, Syracuse University—Prof. H. B. Wilbur and Prof. Van Dyne.

Chicago Medical College—Prof. L. Curtis.
Medical Department University of Georgia—Prof. E. Geddings.

Indiana Medical College—Prof. T. B. Harvey and Prof. L. D. Waterman.

Medical Department University of Wooster—Prof. W. J. Scott.

Cleveland Medical College—Prof. J. H. Bennett and Prof. Heims.

Detroit Medical College—Prof. E. W. Jenks and Prof. L. Connor.

Starling Medical College—Prof. S. Loving.

Medical Department University of Vermont—Prof. H. D. Holton.

St. Louis Medical College—Prof. J. L. B. Alleyne.

Atlanta Medical College—Prof. W. F. Westmoreland.

Medical Department University of Nashville—Prof. W. T. Briggs.

Medical Department Vanderbilt University—Prof. T. A. Acheson.

Missouri Medical College—Prof. A. P. Lankford.

Keokuk College Physicians and Surgeons—Prof. J. J. M. Angier.

Columbus Medical College—Prof. J. F. Baldwin.

On motion of Prof. Yandell, Prof. J. B. Biddle was elected president of the convention, and on motion of Prof. Bennett, Prof. Leartus Connor was elected secretary.

On motion of Prof. E. Curtis, it was

Resolved, That the action of the convention shall not be considered binding upon the colleges represented unless endorsed by their respective faculties.

On motion of Prof. Gross, it was

Resolved, That a committee be appointed to submit business for the consideration of the convention, to report at the afternoon session.

The chair appointed as this committee, Profs. Bodine, Gross, Geddings, Holton and Scott.

The convention adjourned until four P. M.

Pursuant to adjournment the convention re-assembled at four P. M., the president in the chair.

The minutes of the last meeting were read and approved.

Prof. Bodine, from the committee to prepare business for the convention, reported the following questions for its consideration:

1st. Shall the beneficiary system, with its present abuses, be condemned or endorsed?

After discussion, on motion of Prof. E. Curtis, the following preamble and resolutions were adopted with reference to question first:

WHEREAS, The practice of reducing or remitting in individual cases the established fees of a college has the objectionable feature of discriminating between students who may be equally deserving, and opening the door to possible gross abuses; therefore

Resolved, first, That this convention regards the above privilege as one to be deprecated in general, and, if put into practice at all, to be exercised both rarely and reluctantly, and only in unusual circumstances, and after unsolicited application by proven deserving candidates.

Resolved, second, That anything like a wholesale system of such reduction or remission of established fees, or any open solicitation of recipients of such favors be regarded as in the highest degree improper, and that any college indulging in such practices deserves to forfeit its place on the *ad eundem* list of medical colleges.

2d. Shall two consecutive courses of lectures in one year entitle students to become candidates for graduation?

On motion of Prof. E. Curtis, it was

Resolved, That it is the opinion of this convention that no two consecutive sets of lecture tickets shall be regarded as fulfilling the usual prerequisites of instruction for graduation, where the time between the beginning of the first course and the end of the second is less than fifteen months.

3d. Shall any faculty under any circumstances issue a diploma not bearing the graduate's name?

On motion of Prof. Waterman, it was

Resolved, That no medical faculty should issue a diploma not bearing the graduate's name.

It was ordered that the meetings of the convention shall be at ten A. M. and four P. M. On motion the convention adjourned.

The convention reassembled on Saturday, June 3, at ten A. M., the president in the chair.

The minutes of the previous meeting were read and approved.

On motion of Prof. L. P. Yandell, Jr., the regular order of business was suspended, and communications were read from the faculties of the following medical colleges: Louisville Medical College, Kentucky School of Medicine, Evansville Medical College, Rush Medical College, Medical Department University Louisiana, Medical School of Harvard University, Savannah Medical College, Cincinnati College of Medicine and Surgery, Medical College of State of South Carolina.

On motion of Prof. Atchison, these communications were placed on file.

4th. Shall this convention resolve itself into a permanent organization?

On motion of Prof. Atchison, it was

Resolved, That the question be referred to a committee of five, to report at the afternoon session.

The chair appointed as this committee Profs. Atchison. L. Curtis, E. Curtis, Yandell and Scott.

On motion of Prof. Rogers, the president and secretary of the convention and Prof. Atchison were appointed a committee on publication.

5th. Is there any reason why the customary diploma fee shall be abolished?

On motion of Prof. Rogers, it was

Resolved, That it is the sense of the convention that the diploma fee should not be abolished?

6th. Is it advisable to adopt a graded course of study?

On motion of Prof. Bodine, the following preamble and resolution were adopted in reference to this question.

WHEREAS, A knowledge of the elementary branches of medicine should precede a study of the practical branches,

Resolved, That, in the hope of inducing students to prolong and systematize their studies, this convention recommends to all medical colleges to offer to students the option of three courses of lectures, after a plan similar to the following: Students who have attended two full courses of lectures on anatomy, chemistry, materia medica and physiology, may be examined upon any of these subjects at the end of their second course. During their third course such students may devote themselves to the lectures upon the theory and practice of medicine, surgery, obstetrics and diseases of women and children, upon which subjects only they shall be examined at the final examination for the degree of M. D.—their standing however to be determined by the results of both examinations.

On motion, adjourned till four P. M.

The convention re-assembled at four P. M., the president in the chair.

The minutes of the last meeting were read and approved.

Prof. Atchison, from the committee to whom the subject of permanent organization was referred, reported the following resolutions:

Resolved, first, That this *convention* now proceed to form a Provisional Association of American Medical Colleges, under its present officers.

Resolved, second, That when the Association adjourns, it shall adjourn to meet at the call of its president.

Resolved, third, That the various medical colleges be invited to take into consideration the project of forming, at the next meeting of this Provisional Association, a Permanent Association of American Medical Colleges.

Resolved, fourth, That for the furtherance of this object a committee of three be appointed at this meeting to confer by letter with the various colleges, and invite their views on the proper object and plan of such proposed organization; and upon the receipt of the same, to draft a constitution and by-laws for a Permanent Association, to be submitted at the next meeting of this Association.

Resolved, fifth, That the advisory resolutions upon matters of college policy passed by this convention be printed and forwarded to all regular medical colleges in the United States for their consideration.

The chair appointed as committee to carry out the foregoing

resolutions Prof. T. A. Atchison, Prof. Edward Curtis and Prof. L. P. Yandell, Jr.

These resolutions were adopted, and the convention resolved itself into the Provisional Association of American Medical Colleges.

7th. Is it proper for a regular college to have any kind of alliance with homœopathy?

On motion of Prof. Atchison, it was unanimously

Resolved, That in the opinion of this Association, medical colleges ought not to recognize or hold fellowship with any school or its alumni in which irregular medicine is taught as a part of the curriculum.

8th. Can college fees be made uniform?

On motion of Prof. Geddings, this question was referred to a committee of five, to report at the meeting of the Association to be held in 1877.

The chair appointed Profs. Geddings, Gross, Angier, E. Curtis and L. Curtis, this committee.

On motion of Prof. Biddle the following resolution was unanimously adopted:

No degree in medicine should be conferred under any circumstances, except after an examination in person of the candidate upon all the branches of medicine.

On motion of Prof. Atchison, the thanks of the Association were tendered to the president for the able and impartial manner in which he had discharged the duties of the chair.

On motion of Prof. Yandell, the thanks of the Association were tendered to the secretary for his efficient services.

On motion of Prof. Larrabee, the thanks of the Association were tendered to Jefferson Medical College for the use of the hall, and other courtesies.

On motion, the Association adjourned to meet at the call of the president.

J. B. BIDDLE, M. D. *President*.

LEARTUS CONNOR, M. D., *Secretary*.

CHICAGO SOCIETY OF PHYSICIANS AND SURGEONS.

April 24, 1876.

The following paper was read by Dr. Hyde, on the use of salicylic acid in inflammatory rheumatism:

CASE I. POLYARTHRITIS RHEUMATICA.

(Treated by DR. MACARTHUR.)

W. N. B., aged twenty-nine, was the subject of an attack of inflammatory rheumatism precisely three years ago, affecting all the joints, and complicated with endocarditis, lasting four weeks.

March 1st. Found patient in bed with several of the larger joints affected, very emaciated and great debility from riotous living and dissipation. Was immediately put on the alkaline treatment with iodine applications to the swollen joints and rolled up in cotton batting. This was continued, with the addition of tonics, nourishing diet, etc., for fifteen days, my patient becoming weaker and the rheumatic difficulty growing worse from day to day.

March 16th. Patient very much depressed in spirits, haggard countenance, anemic murmur at base of heart and every joint in body affected with rheumatism. All previous treatment discontinued; was ordered 10 gr. doses of salicylic acid every two hours in wafer paper at 10 A. M.

Met Prof. Allen at 7 P. M. in consultation. Found patient very much improved; countenance quite bright, with the stiffness and soreness of joints very much diminished. Prof. Allen very kindly consented to give the salicylic acid a fair trial, although he had no faith in it.

17th. Patient exclaimed, on my entry into the room, that he had no use for me, his rheumatism was all gone; had slept well for the first time since his illness began; except when awoke to take his medicine, slept continually all night. Had only taken 120 grs. of the acid, producing no unpleasant effects, except hyperæsthesia in hearing. On account of illness, did not visit patient for five days, when I learned that the day prior he had some rheumatism in his left shoulder, elbow and

wrist. Ordered the acid to be repeated, when he now took 240 grs. with entire removal of all rheumatic symptoms from this time forward; no relapse occurred, and his recovery was rapid and permanent. The treatment followed is that of Dr. Stricker, of Charity Hospital, Berlin.

CASE II. Acute inflammatory rheumatism cured in 36 hours; 360 grs. of the acid administered in 10 gr. doses consecutively.

M. B. Thompson, aged forty-six, came to Chicago last fall from Alabama, where he had been a victim of yellow fever and intermittent; had the last disease for the past three years whilst living south.

March 26th. Arrived at patient's house at 4 P. M.; found him unable to stir hand or foot, or turn over in bed; face flushed, temperature 104.5, pulse 136, respiration 20, tongue coated; was suffering most acute pain in all his joints, which were very tender and swollen; even the carpal and phalangeal articulations were involved. I immediately prescribed the acid in 10 gr. doses, to be taken every two hours; no other medicine.

27th, 10 A. M. Temperature 101°, pulse 97, slept well after 2 A. M.; joints could be moved freely without producing much pain; swelling diminished, tongue moist, perspiring freely; the acid to be continued.

28th. Pulse 80, temperature 99°; swelling of joints entirely disappeared; could be freely handled and moved about without producing the slightest pain. Ordered the acid to be continued every four hours. This was my third and last visit, as patient's wife reported from day to day his condition. The acid was continued until he had taken 360 grs. in all, when the rheumatic symptoms had all subsided. On the following day—the fifth of the disease—was put on a tonic of quinine and iron; convalescence was rapid; walked around the house on the sixth day, and continues to improve daily. No toxic effects from the drug except ringing in his ears and somewhat dull in hearing.

CASE III. RHEUMATISM TREATED BY SALICYLIC ACID.

(Case treated by DR. A. FISHER.)

G., an Italian, fifty years of age, had suffered from previous attacks of rheumatism. On March 13, 1876, Dr. Fisher was called to see him in a close and poorly ventilated apartment in the third story of a public building. He was then found to be suffering from a rheumatic affection of the wrists and knees, which were swollen to such a degree as to produce immobility; quite painful and tender, and exhibited externally a roseate flush. There was also fever, a rapid pulse, and the tongue coated with a thick pasty secretion. The patient improved under the treatment by colchicum and the iodide of potassium until three or four days had elapsed, when all the symptoms recurred with the severity of the first manifestations of the disease. On the 22d of March he was placed on 10 grains of salicylic acid given every two hours, night and day, until two drachms had been taken.

March 23d. The patient declared he was cured; the swelling of the joints, pain and tenderness had quite subsided. The acid was given every four hours only.

March 24th. Improvement rapid and satisfactory. Tongue clean and appetite returning. Ordered the acid to be given for a brief time thrice daily and discontinued attendance.

THE CHICAGO MEDICAL SOCIETY.

Meeting, May 15, 1876.

(Reported by J. SUYDAM KNOX, M. D.)

Prof. Jos. P. Ross exhibited a pathological specimen of tumor of the brain, with its history, as furnished by Dr. Cunningham, of the Cook County Insane Asylum. The following is a brief summary:

Peter Riley, Irish laborer, aged thirty-one, was admitted to the asylum Oct. 21, 1873, as a case of mania epileptica, and died there in convulsion Feb. 15, 1876. From three months previous to admission in the asylum, until death, the patient

was subject to apparent epilepsy, falling suddenly convulsed and unconscious, without premonitory symptoms, and recovering from the attacks without stupor. These convulsions occurred from once to three times a day, with occasional intermissions of three or four days. His gait was shuffling and staggering, not favoring either side. His speech was thick and incoherent, and his intellect impaired, with inability to converse or reason. He however daily recognized his attending physician. He walked about the ward the day before his death.

An autopsy revealed the following abnormal conditions. The vessels of the meninges were extensively engorged with blood, and the parietal grooves for the middle meningeal arteries were extremely well marked. Imbedded in the substance of the left convolution of the longitudinal fissure, near its upper margin posteriorly, and entirely unconnected with the meninges, was a calcareous formation of irregular shape, about one inch in length, $\frac{3}{4}$ inch in breadth at widest part, and $\frac{1}{4}$ inch in thickness. Separated from this growth and close to it was another of similar character, about twice the size of a pea. Directly above this spot, in the convolution, the arachnoid was slightly covered by a bluish white, purulent appearing substance, and the dura mater was more than normally adherent to the parietal bone. The left lobe of the cerebellum was almost entirely wasted, what remained being so disorganized as to break down under the slightest touch. There was no indication of any previous injury of the skull.

Dr. Ross expressing regret at the meagre history of the case, reviewed briefly the tumors of the brain, viz.: 1. Those connected with the meninges of the brain and its cavities—tubercular and syphilitic. 2. Those associated with the sheaths of bloodvessels—tubercular, syphilitic and cancerous. 3. Those arising from the neuroglia of the brain itself—called by Virchow gliomata. The Dr. then put the question whether the specimens presented were the ultimate product of a tubercular tumor, with subsequent calcareous degeneration, or a similar degeneration of a glioma.

Dr. H. M. Lyman thought that the specimens were the ulti-

mate product of a glioma with subsequent ossification. The convulsions, from their character, were epileptiform and not epileptic.

Dr. E. L. Holmes expressed the opinion that the tendency of gliomata arising from the retina was to increase and absorb surrounding tissues, not to degenerate. Tumors any where in the brain very often produce blindness. It is extremely difficult to locate them, with blindness as the prominent symptom. He then briefly narrated a case (reported in *Archives of Ophthalmology and Otology*, Vol. 4, 1875,) occurring in his practice several years ago. The patient first experienced a fullness of the head with complete deafness in the left ear, soon followed by a peculiar intra-cranial sound synchronous with the pulse. Gradually vision of the left eye began to fail and then that of the right. Soon after the sense of smell became totally, and the sense of taste partially destroyed. The patient also experienced the most intense and disagreeable subjective odor, also at times agonizing pains in the right hip joint. In the last months of the illness there was progressive muscular paresis, with extreme emaciation. The patient died after a three years' illness, with all the special senses destroyed except hearing in the right ear. The mental faculties and the power of speech remained until the last two days. An autopsy revealed a tumor as large as a hen's egg at the base of the brain, which proved to be a hypertrophied pituitary body. The tumor had pressed upon the carotid artery, causing a large anæmism. A quantity of serum was found in the ventricles so large as apparently to have absorbed all the white substance of the brain.

Dr. W. F. Lewis next reported a most interesting case of pleuro-pneumonia, with ulceration of the lung and pleuræ and escape of air into the cellular tissue. The Dr.'s history of the case was as follows:

"I was called to attend Mr. G. on the 30th March, 1876, the third day of his illness. There was great dyspnœa, the patient being compelled to sit up in bed; pulse 110; respiration 30; temperature normal; skin moist; abdominal breathing. There was crepitation of air in the cellular tissue over

the whole chest and a part of the neck, with considerable tumefaction and fullness of the right side of the chest. Physical exploration of the chest gave on palpation vocal fremitus, exaggerated over left and absent over right lung, save at the apex; on percussion, dullness over entire right lung except at the apex, which with the left was tympanitic. Auscultation revealed tubular breathing over the entire right lung, except at the apex, where there was exaggerated respiratory sound. Patient stated he was taken sick March 27th with acute pain in right side, and said 'something had given way there.' There then occurred slight chill, attempts at vomiting, dry hacking cough, with 'swelling of the neck,' which increased by nearly one-third its natural size; this lasting, however, only for a short time."

There was no history of hereditary disease, and patient was apparently a robust man, though for a number of months he had been slowly failing in health. Death occurred April 1, 1876, after an illness of five days. Autopsy made the following afternoon. By special request of the friends thorax alone opened. Body well nourished. Enlargement of right side of chest very noticeable, also the presence of air in the subdermal cellular tissue. Upon removal of the sternum there was a large escape of serum from the right thoracic cavity, turbid with flakes of lymph and with pus. The lower two-thirds of the lung was bound in many places to the costal pleura by firm adhesions, especially so over the middle anterior surface of the lower lobe. These adhesions were so firm that it was impossible to remove the lung in fit condition for proper examination. The upper half of superior lobe of right lung, and the whole of left lung, appeared normal. The balance of the right lung was hepatized. At about the middle of the anterior surface of the lower lobe, (the point where the adhesion to the costal pleura was the densest,) a cavity was found filled with pus.

Dr. J. P. Ross remarked that the case was undoubtedly one of pleuro-pneumonia, with adhesion of the pleuræ at the point indicated, subsequently the formation of a pulmonary cavity there, connecting with some large bronchial tube, and then

ulceration through the adherent pleuræ and escape of air. He thought the case extremely rare; had never seen a similar one either in hospital or private practice. Pneumo-thorax, however, was common enough as a result of violence.

Dr. N. Bridge, who, in consultation, had seen the case the day before death, and had then observed the normal temperature, expressed some doubt as to whether pneumonia with hepatization of lung could have occurred so recently, and the temperature have returned so soon to the normal standard.

Hospitals.

MEDICAL DEPARTMENT, COUNTY HOSPITAL.

Service of DR. LYMAN.

(Reported by DR. FENN.)

May 2, 1876. Dr. Lyman presented and made remarks on the following cases:

1. *Chronic Bronchitis.*

Duration three years. A young man. Dyspnœa and cough, worse at night, owing to irritation of sympathetic sub-mucous ganglia. In the day time the influence of the brain reaches the ganglia and restrains them. At night the brain is asleep and the ganglia are left free to respond to excitement. This man's cough and dyspnœa have continued for two years. There is shortness of breath from diminished calibre of the bronchial tubes. In infants swelling narrows the small tubes more than in adults. In infants, therefore, the dangers from dyspnœa are much greater.

Treatment. Care in the acute stage, for there is danger of its becoming chronic. Allay nervous irritability; liquid food; divert the column of the blood; act on the capillary net work

to dilate it and allow the blood to go on. Tartar emetic and sulphate of morphia of each $\frac{1}{32}$ of a grain every hour go well together. In a short time there will be copious perspiration. To promote expectoration give squills. Finally, if there be danger of the attack becoming chronic, administer benzoin, pitch and tar fumes; and later, and by all means if the attack have become chronic, iodide of potassium. This patient had it; whenever it was omitted he got worse. He will probably be an invalid as long as he lives, or at least liable to a new attack with every exposure to cold.

May 5. A number of cases illustrative of diseases of the liver.

1. *Acute Cirrhosis.*

A bright, good looking young woman, aged twenty-two, from the dispensary. Dr. L. remarked that here was a case illustrating the effect of acute disease of the liver. There is a considerable degree of prominence to the abdomen. The lower portion is filled with fluid. Chest resonance lost on the right over the nipple. Dullness on the left. Back dull at a point just below the scapula. The ear applied to the chest detects a respiratory murmur only above the point of dullness. Her hands are cold; tongue red and fissured; feet slightly swollen. Her life has not always been what it should be; she has had syphilis. On her recovery from this she resumed her old course, but had greater hardships. A year ago she began to complain of pain in the right side. She began to take morphia and has continued it ever since. This perhaps accounts for the condition of the tongue; these fissures always indicate chronic dyspepsia. Coldness of the hands is accounted for by the habit of taking opium. Now how shall we account for the enlargement of the abdomen? She says that three weeks ago she was feeling pretty well; then she began to have severe pain under the short ribs, where her pain began a year ago. The dullness extends to the limit of an enlarged liver. In this young person we have a cause which is apt to produce inflammation in any or every organ of the

body. Syphilis when it attacks the liver produces degeneration; obliteration of vessels ensues. This is as if an obstruction occurred in the current of a river; it may be the product of inflammation of Glisson's capsule. The watery portion of the blood accumulates by extravasation into the abdominal cavity. Two years ago syphilis; one year ago pain; now syphilitic disease of the liver. We only wish this might be the last link in the chain of evils that follow. She will probably return for tapping. Dr. L. recalled the anatomy of the liver and recommended to get the idea in a bunch of grapes. The stalk is the hepatic vein. A spider spins his web amid the clusters. This may represent the ramifications of the hepatic artery. Another spider's web over the same surface may represent the portal veins in their finest distribution. The lymphatics and nerves in like manner intimately pervade the spaces between the lobules. Another system or web exists in the bile ducts themselves ready to receive the bile, one of the most complicated and most beautiful. All these elements are supported by areolar tissue. Here is the seat of this inflammation. First there is swelling, then effusion, then contraction; hence pressure interfering with the passage of blood, with nutrition of the liver, and with the removal of bile—in every respect like a cluster of grapes, shrinking until it becomes a dry and sapless bunch of raisins. This condition exists in the following case:

2. *Chronic Cirrhosis.*

Admitted March 20th. The abdomen is sunken; great emaciation. On percussion of the lungs resonance is great; resonance where it should be dull; that is, over the region of the liver. Resonance all over the abdomen in varying degree, according to the size of the bowel. The liver is evidently shrunken. A drop of sulphuric acid in a little of his urine, on a plate, develops a violet color which spreads, showing bile to be in the urine. The only way of escape to the bile, if any hepatic cells retain the power of secretion, is by resorption into the blood vessels. This is cirrhosis. There is no fluid in this case because the man has hemorrhoids. The

bloody discharges unload the engorgement in a measure; besides, we believe that anastomosis has taken place between these enlarged hemorrhoidal vessels and the internal iliac. He also has diarrhoea. There is distention of the capillaries and thickening of the mucous lining of the stomach and intestinal canal. Nutrition is interfered with. The patient starves to death. The temperature is elevated to $99\frac{1}{2}^{\circ}$, enabling us to distinguish these from cancerous affections, in which the temperature is usually depressed. He is really in the last stages.

3. *Chronic Cirrhosis; Dropsy.*

Another old case exhibited as a variety of the disease. He has been tapped twice. Now the distension that has again occurred demands that the operation be repeated. Note particularly the effect upon the umbilicus, where it appears as if there was a little hernia. This is owing to the weaker structure of the abdominal walls at this point from the great pressure of the fluid within. The most common cause of cirrhosis of the liver is alcohol. Alcohol promotes a tendency to the coagulation of albumen. As soon as it is all absorbed it has to pass through the liver. The brunt of the attack is here; constant irritation does the work. The disease is difficult to trace clear to its origin, but little by little it comes on. Finally there is almost complete disappearance of the channels through the liver, as we have described; outpouring of serum and plastic lymph into the cavities or in the areolar tissues of the body. The duration is essentially chronic, but if the cause be syphilis it is apt to be rapid; little can be done. It cannot be cured; we can only palliate; draw off fluid; relieve pain; assist bowels, urinary organs and skin. In general, sooner or later, the patient becomes a victim to the anatomist's scalpel.

1. *Typhoid Fever.*

May 9. There is the same relation between spurious and genuine typhoid fever that exists between cholera morbus and Asiatic cholera. The lesion is the same when death occurs, but

there will be no propagation of the disease. True typhoid fever is propagated. A great amount of the typhoid fever in towns is due to contamination of the soil and percolation into the wells and springs. It is a very important thing, therefore, to be careful what becomes of the excretions of typhoid patients. Dr. L. related an account of the outbreak of typhoid fever which recently occurred at the village of Lausanne, in Switzerland. (*Nature*, Vol. xiii., p. 447.) The source of the poison was traced to an isolated farm house on the opposite side of a mountain ridge, where an imported case of typhoid fever followed by two others occurred shortly before the outbreak. A brook which ran past this house received the dejections of the patients, and their linen was washed in it. This brook was employed for the irrigation of some meadows near the farm house, and the effluent water filtered through the intervening mountain to a spring used in all the houses of Lausanne except six which were supplied with water from private wells. In these six houses no case of fever occurred, but scarcely one of the others escaped. No less than one hundred and thirty people, or seventeen per cent. of the whole population were attacked besides fourteen children who received the infection whilst at home for their holidays and afterwards sickened on their return to school. The passage of water from the irrigated meadows to the spring at Lausanne was proved by dissolving in it at the meadows eighteen hundred weight of common salt and then observing the rapid increase of chlorine in the spring water, but the most important and interesting experiment consisted in mixing uniformly with the water fifty hundred weight of flour, not a trace of which made its way to the spring, thus showing that the water was *filtered* through the intervening earth and did not pass by an underground channel. So far as medicine is concerned there is very little to do. We have the effect of poisoning of the blood, interference with nutrition and with elimination. It requires a determinate time for these changes to take place. Sometimes eliminants are sufficient; but generally the germs have propagated themselves and have poisoned the tissues. The tendency is to destruction of tissue. The temperature here now is 103°.

We must supply nutriment; food should be given frequently and in small quantity. The diarrhoea in the early stages of the disease is due to irritation of the mucous lining of the stomach. It is not well to interfere in the first stage; but in later stages give acids. Mineral acids have no direct curative effect; secure sleep. Be careful about the administration of opiates. Do not leave them to the discretion of the nurse, lest they produce a tendency to collapse. The temperature should be attended to above everything else. The heart becomes degenerated very rapidly by the great heat of the blood; hence the feebleness. The patient may faint and sudden death may occur. The effect of the high temperature on the nervous system is to produce delirium. To lower the temperature of the patient put him in a bath at the temperature of the blood, then cool to 72° . Keep him in ten minutes. Afterwards watch him; if his temperature rise to $102\frac{1}{2}^{\circ}$ put him in the bath again. This treatment has reduced mortality greatly; it diminishes the dangers from every direction. In the epidemic which occurred among the dregs of European armies after the Franco-Prussian war, the mortality was reduced from twenty-seven per cent. to eight per cent. by this method. Some precautions are very necessary; use the thermometer; have a good nurse, and follow up faithfully. After putting the patient back to bed, a little wine may be given if he is faint. Thus typhoid fever becomes an easy and agreeable disease to treat.

2. *Pneumonia, complicated with Pleuritis, Bronchitis and Tubercular Deposits.*

A fair-skinned young man pretty well developed, arrived yesterday. He has had a cough for three years, as he says. One week ago, after sitting in a cold draft, he had a chill and great pain in the right side. Respiration now 56; temperature 104° ; tongue normal; expectoration frothy, tenacious, colored with blood. Such sputa are complex. The frothy portion is from the bronchial tubes. The tenacious portion arises in the bronchioles; the blood is partly from there, but primarily from the air cells of the lungs. Resonance exists

all over the left; dullness all over the right; loss of respiratory sound at the base. Over the middle it is almost cavernous, so exaggerated is the tubular character of the breathing. There is also a well marked friction sound anteriorly. Rhonchus is perceptible to the hand on both sides. We have a combination here of inflammation of the air cells and finer air tubes, pleurisy and bronchitis; this patient has had a cough for three years. Since it is unusual to find pneumonia at the apex without tubercular deposit, it is probable that we have tuberculosis also. But in tuberculosis we have no characteristic symptom. In pneumonia the exudation is in the air cells and in the bronchioles. The consolidation is the same; the irritation is the same. But a distinction may be certainly derived by watching the location and progress of the consolidation. It is not probable that he will get well perfectly, but rather that the tuberculosis will extend. We can only assure him of an amelioration of his symptoms. The man will get back with another attack in a year or two. Treatment rational. He has only one lung to breath with now; hence there is an accumulation of carbonic acid in the blood. Make the blood flow more rapidly by inviting it from the lungs to the surface and relieve the pressure in the engorged capillaries. Mustard and cups will do this. The lung surface equals 200 square yards of aerating membrane. In this case 100 square yards are gone. Supply the deficiency by increasing the activity of the bowels, skin and kidneys. A stimulating cathartic, as of rhubarb, soda and calomel, will do well. Give acetate of potash water, or effervescing powder and water to stimulate the kidneys; stimulating expectorants; give ipecac., just short of producing nausea, often as once in two or three hours, small doses often. If patient get relief from poultices use them. If he be a child, use oil silk lined with Canton flannel; it is almost as good as a poultice and neater. Pour in nourishment as rapidly as possible; milk, milk-punch, stimulants in large quantities; sometimes a quart of brandy daily; even two quarts in twenty-four hours; but in general a tablespoonful every hour is sufficient. Avoid opiates, for they interfere with the

circulation of the blood by contracting the capillaries. Resort to remedies which dilate the capillaries; chloral does this.

REPORT OF CLINICS IN COUNTY HOSPITAL.

Medical Department, Service of DR. BEVAN.

(Reported by DR. FENN.)

The Cook County Hospital for the Month ending May 10, 1876.

March 21. Dr. Bevan introduced and made remarks on the following cases:

1. *Locomotor ataxia.*

A fair, black haired woman, aged about forty. There is loss of ability to use the limbs; simply want of power of co-ordination. She is able to resist flexion or extension, when the attempt is made passively, to bend or to straighten her limbs against her will. The capacity of man's strength is inherent in the muscles themselves; but if this patient attempts to stand with her eyes shut she totters over. There is also a great amount of confusion in her head if she merely shuts her eyes lying down; vertigo, dizziness. Pathological anatomy discovers changes in the spinal cord, a low degree of hyperæmia, known in *post mortems* by degeneration of the posterior columns; sometimes sclerosis, sometimes softening or thickening. These patients seldom die but of some intercurrent disease, enteritis, disease of the bladder or some lung affection.

Treatment. Nothing permanently influences it. Counter irritation is of no use. All forms have been tried, even the actual cautery. Sometimes good seems to be derived from the neuro tonics. Sometimes from electricity, by keeping the nerves to the lower extremities somewhat stimulated. On the theory that there is hyperæmia, the treatment mentioned in the history was bad. It will probably all fail.

2. *Tubercular degeneration of the mesenteric glands.*

A pale, emaciated child, aged five or six years; has been sick four months. He has had a cough continually. Spits white thick stuff. Abdomen rather portuberant, as in scrofula. Dullness at the apex of the left lung.

Treatment. Two drachms of cod liver oil and fifteen drops of the syrup of iodide of iron. Externally paint with the tincture of iodine and apply oil silk or chamois skin.

1. *Pathological.*

March 25. Exhibited a brain from a man who had died of apoplexy. Duration one week. A physician. On laying open the ventricles, a large dark clot of blood was found in the left and a collection of serum in the right. The condition of the tissue over the clot was that of disorganized brain matter, diffused like a layer of mortar. The surface of the brain was covered with a thin, pearly coating, the result of fibrinous effusion. Under the membrane a decided serous effusion was found, which flowed away. The paralysis had been so great that he could neither swallow food nor medicine.

Dr. B. remarked that the Hospital afforded numerous such cases, but the friends generally desire to take them away, hence the opportunities for *post mortem* examination are few.

2. *Chronic Eczema capitis.*

Old man, aged fifty-three. Disease since last August. Moisture has about ceased.

Treatment. Add six grains of carbolic acid to each ounce of the benzoated oxide of zinc ointment as a stimulant, and give ten drops of Fowler's solution three times daily.

3. *Sciatica.*

Of moderate intensity. The man is from Riverside, where they have ague. A blister has been directed for the outside of the trochanter, and the nerve will be followed up with counter irritants. Also six grains of quinine to be given four times daily, and two grains of opium at night.

1. *Epilepsy.*

March 28. Twelve years standing. Young woman, aged 26, black haired. Opisthotonos is so great during the attack that her body describes half a circle. There is an amount of rigidity that leads almost to muscular inflammation. Soreness continues for some time. The face is seen to be twitching: she says she feels the spasms working on her now. She complains that her flesh feels as if it was full of little needles. She has been receiving thirty grains of bromide of potassium four times daily, and recently one grain of belladonna. It is now proposed that she have an increase of half a grain every five days until she gets three grains at a dose. It affects her sight. The bromide will be continued.

2. *Scurvy.*

A well developed young Norwegian.

Treatment. Abundance of nourishment.

3. *Chronic Dysentery.*

Eight months. An emaciated, slight man, aged about thirty. Seven stools daily. Loss of appetite. Ordered for him yesterday one grain each of opium and ipecac., and two grains of camphor, three times daily. There is entero colitis. Strong nitric acid has been applied to the surface lately, as high as possible, with benefit. Milk diet. The disease is hard to cure here. The class of patient is unfavorable. The food is unfavorable.

Medical News and Items.

PREDETERMINATION OF SEX.—Dr. Preston Capshaw, in the *Phil. Med. and Surg. Rep.*, revamps the old French idea of begetting children of either sex at will. Stock raisers, it is claimed, by regarding the conditions necessary to this predetermination, are enabled to control the sex of colts and

calves. When a *female* product is desired, sexual congress is permitted only at the *earliest* period of the erotic fever. When the *male* young is desired, the sexes are to be kept apart till the climax of erotism is passed. Applying this rule to human beings, the Dr. has found abundant instances to confirm his views. Coition just *prior* to menstruation begets girls; *after* menstruation, boys. Sexual intercourse abstained from for a period of ten or fifteen days *after* menstruation, constitutes a trespass upon the succeeding period, and the result will consequently be a girl. This theory is not a new one. It has been before the profession for many years, and its conspicuous failure in well authenticated cases has been very, very often annotated; so that at the present time it is almost wholly disregarded by physicians. An acquaintance of ours, a very intelligent doctor, who firmly believed the theory, one day expatiated at some length on the certainty of this method of predetermination, and boastingly wound up his remarks by announcing that his residence would furnish, within thirty days, an illustration of the triumph of the theory; it was to be a boy. Within the time specified the doctor's family was increased to the extent of TWO LITTLE GIRLS!!

THE SHOWER OF FLESH IN KENTUCKY.—Dr. A. McL. Hamilton says he has examined, with Dr. J. W. I. Arnold, a piece of the substance of this famous shower, sent to Prof. Chandler of New York. He says they found the piece—ten lines in length by four in breadth—to be lung tissue. There were bronchi, blood vessels, air cells, etc.

Dr. L. D. Kastenbine, who has examined specimens of the matter deposited, declares that he found it to be muscular fibre, that it was voluntary muscle and that he saw the striae distinctly. "On heating a small portion on a platinum spatula," over a burner, "it melted and burned with a 'spurt-ing flame,'" "and the odor was distinctly like rancid mutton," and was so pronounced by meat experts.

On the other hand we are told the substance found, and

supposed to have been deposited in the shower, was nothing but a fungous vegetable growth that develops very rapidly—develops in a single night—from minute germs carried by the winds, and that therefore there was nothing remarkable about the appearance.

We hope somebody will write the true story of the phenomena of that “shower,” and in a way, and attended by an array of facts, and proof of them, that will make the account past gainsaying.

A NEW STOMATOSCOPE.—Dr. Bruck, Jr., a *private docens* of dentistry, in Breslau, has discovered a new mode of illuminating the teeth and cavity of the mouth. The apparatus enables the practitioner to detect the slightest morbid changes in the teeth, and so great is the intensity of the light (to produce which the Drummond lime light is employed) that even the roots of the teeth within the jaw can be recognized.—*Med. Times and Gaz.*, April, 1876.

SCHOOL children's eyes suffer more or less from injured vision, when the school room has windows on both sides; and Germany thinks so seriously of the matter that a law has been passed in that empire, forbidding bilateral windows in schools.—*Times and Gazette*.

THE WAY THEY DO THINGS IN FRANCE. ATTEMPTED PERSONATION AT EXAMINATIONS.—T. Boiron has just been tried at the assizes, with one Coure, an *employé* at the Ville-de-Paris, who had obtained for his accomplice a false certificate, in order to obtain inscription at the Faculty at Montpellier, and enable him to pass the examinations in place of one Crespin, who had fled to Spain. Boiron and Coure were both found guilty, the former being condemned to five years' penal servitude and the latter to five years' imprisonment.”—*Gaz. Hebdomadaire*, April 7, 1876.—*Times and Gaz.*

NECROLOGICAL.—M. Béhier, Professor of Clinical Medicine, in the Hôtel Dieu, died in Paris, May 8.

DR. LUDOVIC HERSCHFELD, Professor of Anatomy, in the University of Warsaw, and the author of the well known Atlas of Plates of the Nervous System, died from dropsy, on May 10.—*Ex.*

Summary of Progress in the Medical Sciences.

I. GYNECOLOGY.

1. *Harmlessness of grave Operations in Pregnancy.* NICAISE. (*Before the Paris Surgical Society*, March 8.)

A woman had periosteal sarcoma of the humerus so far developed that disarticulation was determined upon in spite of the fact that she was far advanced in pregnancy. No accident occurred and labor supervened normally in five weeks. It was concluded that severe surgical operations in pregnancy are less dangerous than is commonly supposed.

Verneuil considered that the gravity was proportioned to the intensity of the traumatic fever. If the temperature rises above 40° C., abortion and all its complications may be feared. But if the traumatic fever is moderate, the prognosis in pregnancy is no less favorable than when there is no gestation.

Polaillon believed that two other factors were not without their influence. Abundant hemorrhage predisposed to grave accidents; and the period of gestation is to be considered, for the first four or five months are more to be feared in this respect than the latter half of the term of pregnancy.

Guéniot agreed with Verneuil, but thought that absolute conclusions could not be drawn from these statements. He had seen women arrive at term after passing through all the stages of pericranial erysipelas of the worst form. An element of uncertainty exists in the variable contractility (physiological irritability?) of the uterus in different women. This difference explains why traumatism is not always followed by the same results in pregnancy.

2. *Cysts of the Vagina.* DUPUY. (*Gazette Obstet.*, April 20.)

All authors agree as to the rarity of vaginal cysts. Judging, however, from the number of recently reported cases, it would seem that this rarity has been exaggerated. The first description of this disease is to be credited either to Sir Astley Cooper or to Okley Heming (1831). Hausmann, however, in Haller's *Elementa Physiologie Corporis Humani*, has discovered the following passage: "*Glandulas vaginæ veras, rotundas, varii viri reper.*

erunt; etiam depinxerunt, in brutis frequentiores; tamen etiam in homine visas. Eas non reperi, estas hydatides (a synonym for cyst in that day) *in vagina vidi, et rejecti Ill. Morgagni."*

They are most often found in the anterior vaginal wall, near the urethra; they are, however, to be discovered elsewhere. A cyst was found in 1872 (service of Demarquay), in the posterior wall, and quite voluminous. There is no recorded observation of such in the lateral walls.

Hegar and Kaltenbach have determined the exact position of these tumors. They are either submucous, interstitial (between the laminae of the muscular layer) or subserous and perivaginal [between the vagina and rectum, above Douglas' cul-de-sac]. Huguier believes they originate in obliterated follicles of the vaginal membrane, but Preuscheu declares they arise in two distinct forms: (a) simple invaginations; (b) the more numerous are deep and broad depressions, presenting narrow prolongations in the shape of the fingers of a glove.

The epithelial lining of the vagina is prolonged into the glands: in the excretory canal it is stratified; elsewhere in the glands it is ciliated and cylindrical. Vaginal cysts may be due to retention of secretion in these glands. When they are found in the excretory canal, the enveloping membrane is furnished interiorly with pavement epithelium; when, on the contrary, they are found in the gland proper, the epithelium is cylindrical.

A vaginal cyst may originate in a hæmatoma. Barnes describes hæmatoma of the vaginal parietes resulting in several cases from labor. The resorption of the blood leaves a pouch which later becomes filled with serum, or sero-pus.

Kolaczek saw a cyst formed by the dilatation of a lacuna of Morgagni, the orifice of communication with the canal of the urethra having been obliterated. The woman was twenty-six years old and had suffered from uterine prolapse for six years. A fluctuating tumor in front of the anterior lip projected beyond the vulva, interfering with locomotion, and yielded, on puncture, a thin mucous fluid, which continued to exude through a fistulous orifice. The cyst, after extirpation, displayed a very dense stratified pavement epithelium. Hence the diagnosis. The dimensions of these cysts vary from those of a pea to those of the fist, and they are sometimes larger. The enveloping membrane may be dense and of determinate borders; or it may be thin, without line of demarcation separating it from contiguous parts. The contents are most often clear colored (like synovial fluid); when ruptured or incised it may become fetid and occasion septicemic accidents.

Certain varieties contain gas (Winkel, Braun, Schröder, Breisky). Schröder's case was that of a pregnant woman, almost the entire portion of whose vagina was covered with confluent elevations, some bright red, others gray and transparent. When punctured small crepitation was heard, and no liquid escaped. Pavement epithelium of variable dimensions was found on their interior, in the midst of which were large rounded cells containing a finely granular protoplasm and beautiful vesicular nuclei.

Breisky's case suffered from vaginal blennorrhagia. The anterior half of the vagina was normal, but the remainder was a conglomerate of small tumors (half pea to small nut in size), rosy or pure white in color. Some had a central depression, the umbilicus and contour of bright red hue. The white, on puncture, gave exit to gas, the red only a few drops of clear serum.

Vaginal cysts interfere with menstruation and coitus, may cause dysmenorrhæa; when extragenital may be painful or interfere with motion.

Simple puncture and ordinary incision do not promise much in the way of treatment. Puncture and irritating injections, or incision and cauterization may be followed by intense reaction, paravaginal inflammation, parametritis, violent inguinal or iliac pain.

Excision of a part of the wall of the cyst may be followed by secondary hemorrhage, requiring the tampon and styptics.

The radical and certain method is total extirpation. A longitudinal incision is made in the long diameter of the tumor, and the vaginal and cystic walls separated by dissection. When the latter is dense, decortication without opening may be attempted. When the wall is thin this is almost impossible, and it is necessary to remove the cyst in its entirety not without considerable difficulty.

Extirpation is best attempted in small cysts with a resisting envelope. For the larger cysts of thin envelopes, extensive incision with cauterization or applications of the tincture of iodine are best employed.

II. THERAPEUTICS.

1. *The Electrolytic Treatment of Tumors.* JULIUS ALTHANS. (London.) *Berl. Kl. Wochenschr.*, Allg. Med. Central. Zt., 35, 1876.

In consideration of the great difference in opinions about the therapeutic usefulness of electrolysis, the author gives a brief account of his latest observations in this field.

1. *Nævus.* It is most frequently found in the face and on the scalp, and electrolysis is the most appropriate means for its removal. It is superior to excision, because there is no hemorrhage; to injections of sesquichloride of iron, because it does not endanger the life; to the cauterization by nitric acid, because it can be localized better; to the subcutaneous ligation, because after the operation the child has no pain and the surgeon has no further trouble; over the galvanocautic, because it does not leave any scar. The ordinary round, small and thin nævus usually yields to one single application, while the larger "portwine stains" require a number of sittings.

The current acts through needles, which set in rows, and connected with the poles of ten to fifteen Daniell's elements are thrust into the tissue of the nævus. As soon as the chain is closed the destruction of the tex-

ture begins with the blood vessels and the integument of the nœvus appearing to wither. The destruction being more thorough around the positive pole, this must always be applied to the worst portion of the nœvus. Usually not a single drop of blood is lost; if, however, by any sudden motion of the patient, a needle should come out, and a drop of blood should appear, this can be coagulated at once and any further bleeding can be prevented by directing the positive pole to the puncture. When all the morbid tissue seems to be destroyed, the current is interrupted and the surface of the nœvus is covered by a piece of gold beater's skin. No further dressing is necessary because the surface remains dry. The eschar is thrown off after about ten or fourteen days, and the surface gradually assumes the appearance of the neighboring integument.

2. *Goitre*. The writer considers electrolysis as especially applicable to the cystic goitre, because it occasions neither pain nor danger. The best *modus operandi* is to introduce two or three needles into the cyst and to connect the same with the negative pole, while the positive electrode is applied to the integument by means of a wet sponge. Through the electrolytic action caustic soda is created out of the solution of chloride of sodium contained in the cyst. This caustic soda cauterizes the secretory lining of the cyst and stops any further secretion. Two to six applications usually are sufficient. In the treatment of parenchymatous goitre the author combines the electrolysis with injections of tincture of iodine into the tissue of the goitre. These parenchymatous injections break up the texture of the tumor and thus the combined method shortens the time of treatment quite materially, especially if the goitre is old and rigid.

3. *Sebaceous Tumors*. They can easily be excised; but many patients dreading an operation, and the excision being occasionally followed by dangerous, even fatal, erysipelas, Althaus advises the use of electrolysis, which will remove these tumors without danger and without leaving a scar. Both electrodes are put into the tumor to have a quick result.

4. *Carcinoma*. The writer advocates the early and thorough extirpation of every primary cancer. But in cases of secondary carcinomata the electrolysis has often done a good service. It cannot, of course, eradicate the cancerous diathesis, nor prevent the fatal termination, but it is very efficient in allaying those lancinating pains, in procuring sleep and comfort to the patient.

The histories of cases are given in support of the author's views expressed in the paper.

2. *Diphtheria Treatment*. Z. C. McELROY, M. D. (*W. Va. Med. Student*, May, 1876.)

This medical philosopher, always sensible and somewhat iconoclastic at times, thus treats this dreaded disease:

"For the bulk of cases, where the temperature does not remain high, or does not reach higher than 103° or 104° F., I seldom make more than one prescription, and am not often called to supplement it by other measures,

except in severe cases, by some opiate to relieve headache, or something to open the bowels. In the latter case I do so by half a grain calomel granules, one every six hours, the desired evacuation almost always occurring within twenty-four hours. The prescription almost always used for an adult is about as follows:

R Chlorate Potass.....	3j.
Dilute Alcohol, } aa.....	f 3 vj.
Pure Water, }	
Tinct. Capsicum.....	f 3 iij.
Liq. Ferri Perchlor.....	f 3 j.

Sig.—A teaspoonful in a wine-glassful of water, to be used as a gargle each time.

After gargling, a teaspoonful in a tablespoonful of water, more or less, to be slowly swallowed, and repeated every three to six hours.

This simple plan of treatment may be varied by increasing or decreasing the quantity of the Perchloride of Iron. For very young children sometimes only five to ten drops, to the two ounce mixture, seldom exceeding the drachm called for in the prescription, for adults, preferring to increase or decrease the frequency of its administration. The Liq. Ferri Perchlor. is not the muriated tincture of iron, though the preparations are both perchlorides. I do not get the same results from the tincture as I get from the solution, and, therefore, do not now ever prescribe the tincture, though I have thought druggists sometimes use it under the impression that they are identical. I have often to write on prescriptions, "not tincture of iron." I have no doubt there are cases occurring in this and other localities requiring other agents, as Quinia, milkpunch, etc., but within the limits of my practice I do not observe them. Diet, bread and milk, to be taken whether there is appetite or not.

I think it a little remarkable that I get very small children to use this gargle; not unfrequently they ask for it when the time draws near to take it. They say it makes their throats feel better. It saves them from having brushes or swabs put in their throats, a proceeding to which they never fail to object."

3. *Salicylic Acid as an Antipyretic.* DR. C. A. EWALD. (*Practitioner*, March, 1876.)

Dr. Ewald (assistant physician to Prof. Frerich's Ward in the Charité Hospital, Berlin) writes on this subject, after having administered between 300 and 400 doses of salicylic acid. He says that there are eight or nine authors in Germany writing to-day on the action and therapeutical uses of this acid. However they may differ on other points, they are all united in asserting that this agent has great antipyretic power. Where reduction of temperature is sought, the administration and action of salicylic acid must be the same. The best preparation is the sodium salt (readily soluble in water), in view of the fact that this salt is doubtless produced in the blood when the pure acid is used. The dose should be large, as small or divided doses have little or no effect. Seventy-five grains should be at once

administered, and if no reduction of temperature follows in four or five hours, a second, or indeed a third similar dose should be given. Two hundred and seventy-five and even three hundred grains have been given by the doctor in the course of twenty-four hours without any ill effect. Where malaise or vomiting follows, three or four drops of chloroform internally will remove them.

After one hundred single doses of salicylate of sodium, given at mid-day, in cases of typhoid fever of nearly equal severity, there was almost immediately a fall of temperature, the maximum result being reached in most cases in from four to five hours, and rarely, in from eighteen to twenty-four hours. This fact was fully established by thermometric observations made every ten minutes in the axilla and rectum. This reduction of temperature was observed in eighty per cent. The results prove the superiority of salicylic acid over all other known antipyretics. "Within fifteen minutes, or even less, after the administration, a copious perspiration breaks out, first on the face, then on the thorax, abdomen and the rest of the body, accompanied by a redness of the skin, more especially that of the face, and may be so copious that the patients may lose 500 to 750 grammes of water" (a pint to a pint and a half). The defervescence begins with the perspiration, though the two do not always continue *pari passu*. Generally the pulse, respiration and intestinal tract are unaffected. Where lesions are produced on the latter, they have arisen from impurities along with the drug, as carbolic acid. The acid is eliminated from the kidneys and appears as *salicyluric acid*. Tinnitus aurium, vertigo, hallucination in one case, and, where the sweating has been excessive, partial collapse, have occasionally been observed. Where this agent has been administered to feeble patients, analeptic and stimulating remedies have been given at the same time to forestall collapse. The *modus operandi* of this drug is wholly unsettled. Its beneficial use in polyarthritica rheumatica is universally attested. "Indeed, one may say, with certainty, that in many cases (of rheumatic fever) after three or four doses, or even after five or ten grammes, (75 or 150 grains) not only is the fever reduced but the articular pains also are dispersed, so that in a FEW DAYS acute cases may be looked upon AS CURED. Whether, however, the tendency to relapses and inflammations of serous tissues is lessened is doubtful, and, indeed, from my own experiences must be negatived."

4. *Hypodermic Injections of Cold Water for the relief of Pains.* S. H. DES-SAN, M. D. (*N. Y. Med. Jour.*, June, 1876.)

The notes of seven cases of relief from the articular pains of acute rheumatism are given somewhat in detail. Nothing but cold water was used hypodermically. The stereotyped result in every case was *immediate* relief from pain. The injection was made about the painful part. The larger the amount of water used, the longer was the relief. When only ten drops were used the relief was of very short duration. When a syringe full of water or more was used, the relief was very prolonged. The writer reports only rheumatic pains relieved thus.

5. *Some Bad Effects of Salicylic Acid in Acute Rheumatism.* JOSEPH G. RICHARDSON, M. D. (*Phil. Med. Times*, May 13, 1876.)

The reporter records four cases in which this agent, so lavishly lauded of late in rheumatism, was followed by some adverse symptoms. In the first case 140 grains of salicylic acid were administered in 120 hours, "when it produced *nausea* and was discontinued, without any apparent effect upon the rheumatic complaint having resulted." In the second case, 110 grains, given in 72 hours, produced a reduction of temperature to $96\frac{1}{2}^{\circ}$, F., *the pulse and heart beat becoming intermittent*. The pain and swelling were entirely abolished, and the patient received quinine, beef tea and punch freely, and was soon discharged. In the third case a hyper-defervescence resulted from taking 45 grains in 3 days. In the fourth case, 55 grains were administered in 48 hours, to a man 51 years old, an old rheumatic, on the *tenth* day of the attack. His pains were much relieved, but this "favorable result was attended with profuse perspiration, rapid reduction of temperature and marked diminution of the frequency and force of the pulse;" he also complained of great prostration, and was slightly delirious upon waking from sleep. In all these cases the tendency toward alarming prostration seems to be decided.

6. *Toothache.* W. B. HOLDERNESS, M. D. (*Practitioner*, 1876.)

A paste, made in the palm of the hand, by dropping on to a pinch of soda bicarbonate as much laudanum or wine of opium as the soda will take up, put into a cavity of the carious tooth, will often relieve the pain wholly.

7. *Poulticing in Hæmoptyses.* NOEL GUENEAU DE MUSSY. (*Union Médicale*, May 4, 1876.)

In an attack of hæmoptysis, the writer recommends poultices between the shoulders, at a temperature of about 122° , renewed every four hours.

8. *Amyl nitrite in Nervous and Mental Diseases.* PROF. PICK. (*Irrenfreund*, 2, 1876.)

The physiological effect of an inhalation of amyl nitrite is a dilatation of the arteries, especially of the head; a diminution of the arterial pressure, and an acceleration of the action of the heart. The psychological effect of the remedy is manifested by a hilarious mood of the patient. The effect lasts but a few minutes, and leaves no unpleasant sensations unless an impure preparation was used. The increased frequency of the contractions of the heart is due to the diminution or total abolition of the influence of the pneumo-gastric nerve on the functions of the heart. The dilatation of the arteries is caused by the direct influence of the amyl nitrite in the blood on the muscular tunic of the vessels. The amyl nitrite has successfully been employed in all those nervous and mental diseases which are caused by muscular contractions of the arteries or by an excessive arterial pressure.

Hemicrania, attended by hard pulsating temporal arteries, and by extreme paleness of the face, was quickly relieved by the inhalation of amyl nitrite.

Epilepsy, caused by an anæmia of the brain, as the result of arterial spasms, yielded readily to the inhalation of amyl nitrite. If there was an "aura" preceding the convulsions, the attack could almost always be prevented by an inhalation. Brunton first recommended the amyl nitrite for *angina pectoris*, and its favorable influence on this affection has since been confirmed by many writers.

As to its therapeutic value in melancholy the statements are very conflicting. Meynert claims to have obtained favorable results from its use, while others do not think their patients have been benefited by it.

9. *Croton Chloral*. EMMERT. (*Klin. Monatsbl. f. Angenheilk. Memorialien*, xxi., 2.)

Emmert's experiments lead to results directly opposed to Liebreich's. The croton chloral he experimented with was obtained from Liebr., and employed in the doses recommended by it. "In the most cases four grammes were given. In all cases I observed a blushing of the face, and at first an acceleration, then a retardation of the respiration; the rate of the pulse varied between 60 and 90. Only in one single case there was an undoubted effect of the remedy; it was dubious in all the others. An iridectomy was performed on a very nervous patient, who, under the influence of croton chloral, grew very hilarious and laughed at the operation. A few days later the same operation was performed on the same patient's other eye; but this time no chloral was given and the patient experienced great pain." E.'s conclusions are: 1. Croton chloral may be given safely in doses of six grammes; 2. It is unreliable in its effects; 3. That it does not procure any sleep; 4. It does not cause a complete anæsthesia of the trifacial nerve; 5. It diminishes somewhat the nervous irritability.

10. *Specific against Hydrophobia*. GRZYVALA. (*British Med. Jour.*, April, 1876.)

The writer claims for *XANTHIUM SPINOSUM* antirabic properties. Its efficacy has been tested in one hundred victims bitten by rabid animals, of whom he lost none. Some astonishing instances of the marvelous power of this drug are given, two of which are appended. Twelve persons of one family had been bitten by a mad wolf. Six of this number were admitted into the hospital of Olschanka, Government of Podolia, district of Balta, and were treated with this drug, and all recovered. All of the others, treated with the actual cautery and the daily use of *genista tinctoria* died with hydrophobia in from twelve to sixty days. Thirty oxen had been bitten by a mad wolf; five of them died hydrophobic. The remaining twenty-five were treated with *XANTHIUM SPINOSUM* and recovered. Of the dried leaves, powdered, the dose for an adult is nine

grains, thrice daily. For children under that age, half that dose. For the animals above alluded to, the dose was three ounces daily, given in bran. Too warm a welcome to this new aspirant for the honors of specificity against hydrophobia cannot be extended. The trustworthiness of Dr. Grzyvala is vouched for by Prof. Guber, of Paris.

(*XANTHIUM SPINOSUM*, or CLOT WEED, is a native of the United States as well as Europe, growing in the fields and roadsides from Massachusetts, to Pennsylvania and Georgia. It is a plant growing about one foot high very conspicuously armed with straw-colored spines, and possessed of distinctly sudorific properties.—ED. JOUR. AND EXAM.)

11. *Butyl Chloral*, (*Crotonchloral*.) O. LIEBREICH. (*Deutsche Med. W.*, Centralbl. f. Chir. 18, 1876.)

The writer experimented on rabbits to determine the physiological effect of the butyl chloral. The animals first fell into a profound sleep and exhibited a complete anæsthesia of the head, while any stimulation applied to the extremities still brought out the reflex actions. The anæsthesia then gradually extended from the head over the whole body, when the reflex movements could be elicited no longer. When death occurred the respiration always ceased prior to the action of the heart, and the autopsy conclusively proved the animals had died of suffocation. This shows a remarkable difference in the action of the croton chloral and hydrate of chloral; for the latter remedy kills the animals by paralysis of the heart, and the artificial respiration fails to restore the life, while this can very successfully be employed in the case of death from croton chloral. L. has also studied the effect of the croton chloral on men; and here, too, the anæsthesia of the head was complete, while the reflex action of the limbs was not abolished. For this reason L. thinks that the croton chloral might be used with advantage for operations about the head, especially in such cases where the inhalation of an anæsthetic is not well tolerated. As to the administration, L. prescribes the following formula:

R Butyl Chloral 5 to 10, 3 one to two; Glycerine 20, 3 v; Water 130, 3 vi. Shake the bottle before use. The patient takes one tablespoonful; after five minutes another, and ten minutes later a third one.

Butyl chloral, in doses of one to three grammes, may be given also for toothache.

12. *The Wet Bandage* vs. *Tartar Emetic*. B. H. WASHINGTON, M. D., of Augusta, Georgia. (*Nashville Journal of Med. and Surgery*, May, 1876.)

Heat kills more pneumonia patients than degenerative changes of lung structure. The chief heat abrogators of to-day are tartar emetic and quinine. The writer says: "If any one will use the wet bandage in the treatment of pneumonia, to reduce the superabundant heat, he will never feel any inclination to try tartar emetic again." To use the bandage, "the patient's clothes should be slit down so that the attendant can change the

bandage every four or five minutes without disturbing him; after the intense heat is well reduced it will not be necessary to change it so often." The temperature of the water at first should not be low enough to shock the patient. With robust patients colder water can generally be used; with delicate patients and children it is best to use tepid water throughout. The bandage should be covered with a dry one, and then no fears need be entertained about damaging the invalid. The urgency of the cough disappears greatly under the use of the bandage. Throughout the treatment the terrible heat of this disease can be kept subdued all the time by the wet bandage. Other measures recommended in conjunction with the water application are quinine and an opiate cough mixture at night. With this therapeutic combination tartar emetic is wholly unnecessary.

13. *Topical Treatment of Chronic Dysentery.* M. DILLS, M. D., of Carlisle, Ky. (*N. Y. Med. Jour.*, April, 1876.)

The reporter narrates three cases of topical treatment of dysentery, followed by cures. They were of several months standing each. The first case, that of a girl fourteen years old, was of six months duration. She was in a very low condition, with a pulse 130 and scarcely perceptible, skin covered with a clammy sweat. Her body had emitted a cadaveric odor for several days; death seemed inevitable. After etherization, a bivalve speculum was introduced into the rectum and the "mucous membrane was found highly inflamed and studded over with small yellowish ulcers, which, on slight pressure, emitted a colored fluid." Silver nitrate was freely applied to every part of the bowel, as high up as could be reached with the aid of a retractor. This application was followed by an ability to control the bowel. The appetite was improved, strength increased, and recovery of the vital powers was very speedy. Daily injections of carbolic acid solution (one part to eight of water,) were used. In two weeks the patient made a complete recovery. The other two cases were similarly treated and recovery followed.

14. *Sulphurous Acid in Enteric Fever.* J. WESLEY BOTKIN, M. D., Morrisonville, Ill. (*Phila. Med. and Surg. Reporter*, May, 1876.)

Thirty cases were treated with sulphurous acid, in doses ranging from three to fifteen drops, in lemonade, every four hours. Only one patient of this number died; this one patient "was a fragile girl, whose life was gradually wasting away with consumption, but she recovered, then relapsed and died." The writer thinks the acid acts as a specific upon the fever poison, arresting at once its further development and thus exterminates the fever. Amelioration ensues at once, and in a very few days the patients, under the influence of this agent, are convalescent. Within twenty-four hours the tongue becomes moist and commences to clean; the diarrhoea is speedily arrested, the tympanites subsides, the pulse slows and grows stronger, the digestive faculty speedily asserts itself and the patient is soon out of danger.

15. *Treatment of Diphtheria by Clysters.* W. H. VAIL, M. D. (*N. Y. Med. Record*, May 13, 1876.)

One case is reported — "a true malignant case." Patient was twenty-two months old. Refusing to swallow, the rectum was used. Every four hours during the first week the remedies and food, with brandy, were injected together. When they were dejected, the clyster was immediately repeated, with ten drops of laudanum added, and in every instance the second injection was retained. Alvine dejections were normal and well formed. As the severe symptoms abated the lavements were used every six hours. The rectum was used thus for three weeks. Recovery took place.

16. *Anaphrodisiac Properties of Tobacco.* MARTIN-DAMOURETTE. (*Jour. de Méd. et de Chir.*, May, 1876.)

The anaphrodisiac properties of tobacco have long been known, as Foussard has well shown in his work, and have induced its use in the numerous convents of Italy. When the cause of impotence is obscure, it is well for physicians to remember this noxious property of tobacco, as the following cases observed by the author show:

A young man who smoked more than twenty cigars per day, complained of loss of digestive power, weakness, feeble memory and impotence. As he was about to marry, he consulted a physician. The latter, aware of the habits of his patient, ordered him to discontinue the use of tobacco, which was followed by restoration of the genital function.

A young physician had complete genital frigidity, for which he had taken strychnia till he consumed thirty-six centigrammes daily, without either injurious or remedial results. The author found upon investigation that he smoked cigarettes only, but used them constantly throughout the day. His muscular vigor and power of resisting fatigue were thus sensibly diminished; and the author concluded that the incredible tolerance of strychnia was due to profound paresis of the motor nerves, occasioned by the excessive and gradually increasing use of tobacco. By abandoning its use, this patient was perfectly relieved, without resorting to medicine or hygiene.

A young and robust student of the polytechnic school became an inspector at a tobacco manufactory. He soon experienced considerable loss of genic power and finally became impotent. Both the patient and physician agreed as to the probable cause of the disease, and after vainly making trial of other remedies, the inspector of tobacco engaged in another business, when he speedily recovered his generative power.

17. *Treatment of Diabetes Mellitus by Phenic Acid.* (*Bordeaux Médical*, April, 1876.)

In accordance with the latest theories respecting organic ferments, phenic acid is supposed to influence diabetes mellitus by reason of its well known property of antagonizing the action of ferments. Whatever may be the mode of its operation, its administration is readily effected, is unac-

accompanied by danger, and is serviceable when ordered as follows: Equal parts of the alcoholate of mint and phenic acid are mixed, and two or three drops of the solution are taken morning and evening in a cup of any agreeable infusion.

18. *To make Castor Oil Tasteless.* (Amer. Practitioner.)

Squeeze half an orange into a glass, and pour the oil upon it; then, avoiding disturbing the liquids, squeeze the juice from the other half of the orange over the oil. The contents of the glass can then be "tossed off" without the least perception of the oil flavor.

19. *Nitro Glycerine.* A. J. MINOR, M. D. (Amer. Psycholog. Jour., 1876.)

Therapeutists have long ago determined the healing properties of hydrocyanic acid, woorari, veratria, strychnia, aconitia, and very many other terribly destructive agents; but it is only recently that the therapeutic effect of a diminutive *earthquake*, in the shape of nitro-glycerine, has been recorded. Dr. Minor declares that this agent, in astonishingly minute quantities, will quickly develop a violent headache in a person of sanguine temperament; only as much as can be collected on a "pin's point dipped in the liquid, and the pin shaken to remove any adherent particle in the shape of a drop," being required to produce the above named effect within five minutes. Its supposed action is paresis of the cerebral vaso-motors, and its consequent congestion. One writer regards it as being "highly indicated as a prophylactic in epileptic seizures." It differs from amyl nitrate in being more continuous in its action. It seems to be indicated in all spasms of the cerebral vessels. It has cured cases of neuralgia, but under what conditions cannot be clearly defined.

20. *Intestinal Atony.* McSHERRY. (Canada Med. Record.)

For asthenic constipation, the writer recommends ergot and phosphorus; the latter apparently enhances the action of the former. Ergot, it is well known, is a vaso-motor stimulant; vascular contraction follows its ingestion, and this partial anæmiation produces muscular contractions; hence the increased peristalsis. This formula is recommended:

R	Fl. Ext. Secal. Cornut.,	3 vij.
	Acid Phosphorici Diluti,	3 j.
M.	S. Teaspoonful three times a day.	

21. *Odorless Iodoform.*

Ether dissolves iodoform and robs it of its unpleasant odor. Applying this solution of it, leaves it in a uniform SMELLLESS coating on the surface receiving it after the evaporation of the ether. *N. Y. Med. Record* and *Cincin. Clinic* please take notice.

22. *Cold in the Head.* FERIER. (Doctor, May, 1876.)

Following prescription recommended to be taken as a snuff. One quar-

ter to one-half may be taken in 24 hours, with assurance of certain relief from coryza:

R Hydrochlorate of Morphia.....	gr. ij.
Acacia Powder	dr. ij.
Trisnitrate of Bismuth	dr. vj.
Mix well.	

23. *Danger of Chloroform in Anal Fissure.* NICAISE. (*Gazette Médicale.*)

Patients with the "intolerable" variety of anal fissure seem to possess a nervous system unusually sensitive to the dangerous effects of chloroform. Forced dilation of the sphincter being the almost exclusive means of treatment of to-day, anesthetization is necessary. The writer mentions three patients afflicted with fissure, who were chloroformed and very speedily passed into an alarming state of resolution, with thorax immovable and pulse nearly extinct. Dilatation being immediately performed, the patient, in one instance, came too almost at once. In the other two cases, means of restoring had to be continued for a long time. But small amounts of chloroform were used in each instance. The exalted sensitiveness of the nervous system induced by the terrible suffering incident to anal fissure, is the probable explanation of the remarkable cases here alluded to.

24. *Gelseminum.* CARL HERTZKA ET A. JAURASZ. (*Centralbl. f. d. Med. Wesensch.*, 1875, Nrs. 47 et. 31.)

Pain and weakness in both arms, of two years standing, arising from piano playing, were cured by taking 8 drops of tincture of gelseminum thrice daily for three weeks. In cases of neuralgia of the tregeminal, supraorbital, brachial and sciatic nerves, this drug, in 5-20 drops of the tincture, thrice daily, has been successfully used. In some cases it fails utterly, but in a larger proportion of cases of the neuralgia it can be reliably used.

25. *Treatment of Sunstroke with Hypodermic Injections of Quinine.* A. R. HALL, Surg. British Army. (*Practitioner*, 1876.)

All cases of insolation treated with subcutaneous administration will doubtless receive the *best* chances of recovery. Old army surgeons in British India, where the best opportunity for observing this malady is offered, say the effect of quinine thus applied "may be described as *magical*." Heat is, at first, a vaso-motor stimulant—too long continued in, this stimulation, becomes exhaustion, and then the peculiar condition of the system following is denominated *sunstroke*. The vaso-motor control over the vessels is lost, the cutaneous vessels are turgid with blood, and the sweat glands have apparently lost their power. Theoretically, quinine stimulates the vaso-motors and thus produces capillary contraction; and the peculiar train of morbid circulatory symptoms is broken up, and convalescence sets in. However, whatever the *theory* may be, the practice of putting three to five grains of quinine under the skin is productive of speedy recovery in nearly all cases.

26. *Hyposulphite of Soda in Diphtheria.* TAMBORLINI. (*Raccoglitori Medico.; Jour. de Méd. et de Chir. Prat.*, April, 1876.)

The remedy not only tends to diminish the temperature but to destroy the cryptogam of the false membrane. The hyposulphite of soda is given in doses of from 6 to 20 grammes in from 100 to 300 grammes of distilled water, to which 30 grammes of syrup of orange peel are added. At the same time a gargle is administered, containing 40 grammes of the hyposulphite of soda in 400 of distilled water. The diet should consist of eggs, soup and wine. During convalescence the prolonged use of lactate of iron is recommended. Dr. Tamborlini reports numerous successful cases thus treated.

27. *Convulsions arrested by the Sinistro-Lateral Posture.* F. J. BROWN, M. D. (*Practitioner*, 1876.)

Mr. Bader first pointed out to the profession the advantages of putting the patient on the left side when threatened with danger under chloroform inhalations. Knowing the good effects of this procedure, Dr. Brown applied it in case of a man with Bright's disease, in a uremic convulsions, and the latter ceased instantly. Again he resorted to the same expedient in a man seized with unilateral (right) convulsions, whose consciousness and speech were intact: he had been convulsed ten minutes, when the doctor arrived and immediately turned him upon his right side, and the convulsive action ceased in ten or fifteen seconds. What does this mean? Similar successes are greatly desired to confirm a startling fact—if this postural treatment resulting curatively be a fact.

III. PHYSIOLOGY.

1. *A Theory of the Dicrotic Pulse.* F. P. HENRY, M. D. (*Phila. Med Times*, April 29, 1876.)

This theory is believed to be novel. It is held that "the pulse is composed of two elements," the *wave* of blood and the corresponding wave of dilatation of the artery, and "the blood-current itself, which travels so much slower than the undulation that it arrives at the wrist during the recoil of the artery. It is the blood current which causes the reascent in the line of the sphygmographic tracing." "The undulation precedes the current;" "it consists mainly of an up-and-down movement of the particles, that is, one at right angles to the current, which movement is intermittent. The current consists of a continuous onward movement of the blood-stream, whose volume is increased at each ventricular contraction." The current moves more slowly than the wave; so that while the latter may precede the former at the wrist by one-half second, or about half a pulsation, at the inner malleolus the current may be so far behind the wave with which it

left the heart that its impulse against the walls of the artery may be exactly synonymous with the impulse of the wave produced by the systole following, so that the two acting in unison, a more vigorous pulsation may be produced.

The theory of Morey, that the dicrotic pulse is due to the concussion "received by the blood at the point of division of the aorta into the two primitive iliacs," is denied, for the reason that there is not time for a wave produced by concussion at this point to travel backward and produce the phenomena of dicrotism.

IV. PRACTICAL MEDICINE.

1. *Fork in the Stomach—Gastrotomy—Cure.* LABBE. (*L'Union Médic.*, April 27, 1876.)

A young man eighteen years old, desiring to imitate a juggler, swallowed a fork, whose points were held by his teeth. This he did with impunity several times, but finally, in consequence of a sudden movement induced by some pleasantry on the part of his companions, the part between his teeth slipped away and the foreign body lodged itself deeply in the pharynx. Neither he nor his affrighted companions could seize the fork with the fingers. Dr. Lepère managed to seize the prongs with a long pair of polypus forceps, but the patient pushed him violently away in consequence of the pain excited, when the fork buried itself still deeper in the œsophagus. The patient soon became free from pain and even jocose over his predicament.

In a fortnight, intense pain occurred with syncope, after the relief of which appeared a tumor of considerable size over the large extremity of the stomach. Each meal was succeeded by severe pain. A year passed, during which he had intervals of great pain and comparative comfort. Six months of this period were employed in pursuing his ordinary avocation.

At this time, by means of certain exact manœuvres, he could make the prongs of the fork project between the epigastrium and the hypochondrium, so that it could be very distinctly recognized through the abdominal parietes—the act being more successful when the stomach was distended with aliment. His health and spirits were now profoundly affected.

Gosselin, Larrey and Lepère agreed, after consultation, upon surgical interference by the aid of caustics, but could not succeed in producing adhesions between the stomach and abdominal walls with either the paste of Canquoin or Vienna.

After numerous experiments and studies upon the cadaver, Gosselin, Larrey, Lepère, Coyne and Mene-Maurice assisted the reporter in performing gastrotomy, April 9.

After anæstheziation by chloroform, L. incised each layer separately, to the extent of 4 ctm., in a line extending parallel to the false ribs of the left

side and 1 cm. distant, and terminating in the imaginary line uniting the cartilages of the ninth ribs. Six successive applications of caustic had been previously made in this locality. The wound was kept open and the visceral and parietal layers of peritoneum were found ununited.

The anterior wall of the stomach was seized and drawn somewhat into the wound by a pair of forceps, then a loop of thread was passed through the fold and the latter brought into firm apposition with the lips of the abdominal wound. Eight points of suture were then made with strongly curved needles, through the stomach and abdominal walls—the point of each needle entering the stomach from without inward and escaping in an inverse direction. Thus the visceral and parietal layers of peritoneum were firmly apposed to the extent of 1 cm. almost the entire periphery of the wound.

The stomach was then incised, the foreign body recognized (the prongs fastened in a mass of spongy tissue to the left of the wound in the greater curvature), and after exploration with a pair of long polypus forceps, the fork was seized and readily extracted.

Peritonitis was threatened, but a collodium "cuirass" upon the abdomen, with iced champagne internally, was followed by such improvement that in five days solid aliment was ingested. The cure is now complete, save for the existence of a rapidly contracting gastric fistula, which scarcely admits the little finger.

2. *Rôle of the Buccal Cavity.* GALVAGNI. (*Annali Univ. di Medic.*, Jan., 1876.)

Some phthisical patients are conscious of a rôle in their own persons, which they refer to the base of the neck, toward the fourchette of the sternum, and of which they sometimes complain bitterly. This little rôle is often perceived by persons who approach them and who are intimately associated with them.

Physicians can readily appreciate this sound by bringing the ear near the mouth of the patient. It is small, fine and dry, and is caused by the breaking of one or more small bubbles. It is sometimes audible during inspiration, more often it coincides with the two periods of respiration. Sometimes, though rarely, auscultation of the mouth reveals ronchus and whistling.

At first, one is tempted to localize these sounds in the upper part of the trachea, because of their clearness and often of their intensity; a more attentive examination, however, discloses the fact that they arise more deeply in the lungs. Indeed, if the trachea be examined by the ear with the patient's mouth closed, nothing is heard. The sound reappears as soon as the mouth is reopened. This shows that the sound is engendered deeper than the trachea, and that it is transmitted by the column of air. Beside, when auscultation is made comparatively of the trachea and different parts of the thorax, the sound is discovered in the latter having the same characters as that in the mouth; the bubbles are only a little finer,

dryer and somewhat more high-pitched in the latter case. This is due to the influence exerted by the head cavity upon the sound which it transmits. It is for this reason also that the sound is more distinctly audible near the mouth. Not only is this sound reinforced by the cavity of the mouth and fauces, but also, if it be central in origin, it may be marked to thoracic auscultation by the interposition between it and the ear of pulmonary bubbles full of air.

G. has not only discovered this rôle in phthisis, but also (rarely) in pneumonia, in four cases of capillary bronchitis, in one case of pleural exudation, and in cases of pulmonary vomicae. He attributes to it a very small diagnostic value, but thinks it might be of service in cases of incipient pulmonary phthisis, when thoracic auscultation gives unsatisfactory results. Its greatest value would appear to be in veterinary practice, where thoracic auscultation is often surrounded with great difficulties.

3. *Treatment of Variola by Exclusion of Solar Light.* WATERS AND GADDESSEN. (*Abeille Médic., Lyon Médic.*, May 21, 1876.)

The two authors first published, in 1870 and 1871, their experiments in the treatment of the eruptive fevers by the exclusion of solar light—covering completely the shutters and windows of the patient's chamber with opaque material and lighting the apartment solely by a candle or oil lamp. They concluded that if the daylight were completely excluded from the chamber of the variolous patient the disease became incontestably less grave, the skin affection was arrested at the vesicular stage, pus was not formed, the interspaces between the variolous vesicles did not inflame, crusts did not form, the pain was diminished, the pruritus became insignificant and the odor diminished. *But, if during the period of primitive fever or eruption, the light was admitted to the chamber, even for a few instants, grave consequences followed, and the good effects previously produced were sometimes neutralized.*

Dr. Patin, of Orse, made trial of this treatment in 1870 and 1871, in the cases of seven patients attacked during an epidemic, with encouraging results, as will be seen from the following details:

I. Mme. E. L., non-vaccinated. Delivered on the evening of May 26, 1871. Attacked with confluent variola the next day. May 31, convalescence; fever and eruption arrested.

II. The daughter of this lady, fifteen days old, had confluent variola, June 8. Treatment by obscurity. On the fifth day there was great improvement; but on the 7th day the mother took her out of the darkened chamber to show her to a neighbor, contrary to orders. The variola recurred with intensity, and the child died in the night.

III. Mme. de V., aged fifty-seven years, vaccinated, confluent variola May 31; obscurity June 8; convalescence and no traces of variola.

IV. Miss E. B., aged twenty years. Sent home to her friends June 29th with commencing variola, (very violent fever, rachialgia, variolic pustules upon the upper lip.) Complete obscurity; defervescence in twenty-four hours. For nine days she took supper with the family, after

night-fall. At the expiration of this period she was as "fresh looking as if nothing had occurred."

V. Miss L. G., aged eighteen years. Confluent variola five days after, July 12. Obscurity; convalescence in eight days, without any facial appearances of disease.

VI. Mr. M. L., June 29, confluent variola, (not recognized at the outset.) Repeated bleeding and purging, and finally general prostration with administration of the last sacrament. After a fortnight of obscurity he was cured without facial deformity, but there was suppuration upon lower extremities, resulting from prolonged use of sinapisms.

VII. M., non-vaccinated infant, one year old. Discrete variola after three days invasion. Obscurity; cure in eight days, (having taken no medicine,) without appearance of cicatrices.

These cases are too few, suggests the reviewer, for the purpose of demonstration. He inquires, also, whether it would not be well to experiment with other eruptive fevers, puerperal peritonitis, septicaemia, etc., as well as to investigate the history of these and similar disorders in the localities where the Arctic night occurs. The treatment does not preclude proper medication.

4. *Diagnosis of Fissures of the Anus in Children at the Breast.* MARBOUX.
(*L'Union Médic.*, No. 61.)

Three affections—hæmorrhoids, polypus of the rectum, and fissure of the anus, are accompanied by pain and hæmorrhage, in connection with defecation. Exploration of the anus is indispensable in order to arrive at a diagnosis. This should be performed with great delicacy, so as not to increase the rent (when it exists), and especial care should be taken in completely separating the folds of the mucous membrane, for fissure is always found between two folds, and, when small and recent, is liable to be overlooked in a superficial examination.

Polypus of the rectum is ordinarily seen when the anal opening is examined at the moment of defecation, in the form of a small, red, mamellonnated enlargement, somewhat resembling a raspberry. External hæmorrhoids are readily seen, but then the folds of membrane should always be separated for inspection, as fissure may also be present. Internal hæmorrhoids may also be seen through the anal orifice in the efforts of defecation; and sometimes are with difficulty, and only after several examinations, dissociated from polypus. If exploration of the anus gives negative results, (neither external hæmorrhoids nor fissure) and there are general symptoms pointing to rectal lesion, the diagnosis is between internal hæmorrhoids and polypus beyond recognition by ordinary exploratory procedures. Hence other means of recognition must be adopted.

An important sign of fissure is the unusual resistance encountered by the finger in overcoming the sphincter. When the finger has been previously well oiled, and is introduced as gently as possible, and yet the infant

cries with pain, the existence of fissure may almost be affirmed, and the characteristic lesion is almost always encountered.

5. *Successful Capillary Puncture of the Liver — Urticaria.* LAVERAN.
(*Lyon Médic.*, No. 21.)

L. reported to the Medical Society of the Paris Hospitals a case of successful puncture of the liver, followed by urticaria. Lereboullet assigns the urticarial symptoms to penetration of the contents of the invaded cysts into the peritoneal cavity. But Labbé had a patient with hydatid cyst of the liver, who suffered from urticaria *before* puncture was tried. Urticaria is frequent in all disorders of the gastro-hepatic apparatus in icterus by retention, and in any condition of irritation of the splanchnic nerves. Teauzoni has noticed its appearance after the application of leeches to the neck of the uterus in hysterical patients. Leopold, after leeching over the sacrum. Damaschino has seen urticaria in the cases where puncture had not completely emptied the cyst.

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